CITY OF NORTHAMPTON

OPEN SPACE AND RECREATION PLAN

2005-2010

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2005-2010 OPEN SPACE AND RECREATION PLAN

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Northampton Planning Board:
Keith Wilson, Chair
Kenneth Jodrie
George Kohout
Frandy Johnson
Bill Letendre
David Wilensky
Paul Voss
Jennifer Dierenger

Northampton Conservation Commission
John Body,Chair
C. Mason Maronn
Susan Carbin
Rueven Goldstein
Wendy Sweetser
Paul Wetzel

Recreation Commission:
Thomas J. Parent, Chair
Kevin Coffey
Carol Bertrand
Joan Finn
Michael Laga
Jackie Connley
Michael Flynn
James Gladden
Paul Waterman

Ad Hoc Open Space and Recreation Plan Committee
Mary Shanley-Koerber, Mass. Audubon (invited)
John Body, Conservation Commission
Rueven Goldstein, Conservation Commission
Jackie Connley, Recreation Commission
Ann-Marie Moggio, Director of Recreation
Paul Voss, Planning Board
Jocelyn Forbush, VLF and TTOR
Ray Ellerbrook, Executive Director, Look Park
Robert Zimmermann, Broad Brook Coalition
Michael Wojtech, Wildlife Committee

Project Staff:
Wayne M. Feiden, AICP, Director of Planning and Development
Bruce W. Young, Land Use and Conservation Planner

OPEN SPACE AND RECREATION PLANNING AND THE CITY OF NORTHAMPTON SUSTAINABLE DEVELOPMENT INITIATIVE

The City of Northampton has updated the Open Space and Recreation Plan in order to provide an ongoing framework that outlines how the community can continue to work towards maintaining vibrant urban centers and obtaining the benefits of sustainable development without compromising the City's valued environmental resources.

The development of this plan is coupled with an exciting vision to create a "sustainable development initiative," as announced by Mayor Higgins in May 2005. As part of this process, teams of architects, planners, hydrologists, economic development specialists, and other related professionals will collaborate with the citizens of Northampton to create a comprehensive plan to ensure that our public policies and actions are sustainable long into the future.

Subsequently, over the next 18 months, as the sustainable development initiative progresses, the Open Space and Recreation Plan will likely be subject to change as we seek new and innovative ways to be ecologically sustainable and yet economically viable and socially responsible in our management of the City's open space and recreation areas.

For updated information on the evolution of the Open Space and Recreation Plan, or for information on the sustainable development initiative and how you can get involved, please visit the Office of Planning and Development's website at www.northamptonma.gov/opd.

SECTION 1
PLAN SUMMARY

The Open Space and Recreation Plan provides guidance on how the City of Northampton can best use limited resources to meet the City's open space, conservation, and recreation needs. Building on extensive participation of citizens and municipal boards, the Northampton Conservation Commission, Recreation Commission, and the Planning Board have identified critical steps the City should undertake to meet some of these needs. The City, in cooperation with state and federal funding sources, must:

1. Make capital improvements and improve maintenance of recreation facilities.
2. Manage conservation properties to preserve and restore plant and animal habitats.
3. Acquire land for future recreation needs.
4. Acquire land for conservation and open space needs, preservation of plant and animal habitat, protection of scenic vistas, public enjoyment, and to enhance the character and sustainability of the community.
5. Take regulatory and non-regulatory measures to protect water supplies and sensitive environmental resources.
6. Preserve the environment and cultural and natural resources through land and easement acquisitions and regulation changes.
7. Inform citizens about public and private open space and recreation resources and potential land use options.
8. Identify and examine means for augmenting financial and other resources available for carrying out the goals and objectives laid out in this plan

SECTION 2
INTRODUCTION

STATEMENT OF PURPOSE

The City of Northampton is blessed with an exceptional wealth of scenic, natural, cultural and recreation resources. Public and private organizations, businesses, farmers, and individual citizens provide our residents with open space, conservation, and recreation areas, which contribute greatly to our high quality of life.

The demand, however, for open space and recreation areas exceeds those currently protected and available for public use, public health and public appreciation. Rapid suburban development, escalating land values and limited financial resources have contributed to the loss or degradation of potential open space and recreation areas, and have foreclosed opportunities for their permanent protection and for public use.

This plan provides an inventory of land of ecological, cultural and recreational importance to the City, including permanently protected, temporarily protected and unprotected parcels. It examines and catalogues unmet recreational and resource protection needs and provides guidance on how the city can utilize limited resources to meet Northampton's open space, conservation and recreation needs.

The plan attempts to be specific enough to guide decision-making and planning while allowing flexibility to respond to changing opportunities and constraints. It covers proposed acquisitions of land and easements, and management of current holdings. The plan also touches on regulatory and infrastructure initiatives that can increase Northampton's effectiveness in resource protection without requiring additional funding.

Achievement of the goals outlined herein will require commitment by all parts of Northampton's government and the larger community. While recognizing that there are limits to currently available funds, the City commits to exercising creativity in identifying and obtaining resources from other potential sources as well as utilizing avenues other than acquisition.

Through adoption of this Open Space and Recreation Plan, the City acknowledges that permanent protection and wise stewardship of its natural, cultural and recreational resources are not only intrinsically important, but are also essential to the community's quality of life, long-term economic health and sustainability.

This plan meets the Open Space and Recreation Plan requirements of the Self-Help Act and is an element of the Northampton Comprehensive Plan. The Conservation Commission, Recreation Commission and the Planning Board have adopted the plan. The Planning Board adopted the plan in accordance with Massachusetts General Laws, Chapter 41, §81D.

PLANNING PROCESS AND PUBLIC PARTICIPATION

This plan builds on six earlier *Open Space, Conservation, and Recreation Plans* (1975, 1980, 1985, 1989, 1994, and 2000) and on other planning, conservation and recreation documents, including *Northampton Vision 2020* (1999) and *Grow Smart Northampton: Community Development Plan* (2002). This plan was written under the direction of the Conservation Commission, Recreation Commission, and Planning Board, with participation from an ad-hoc Open Space and Recreation Plan Committee.

The ad-hoc Open Space and Recreation Plan Committee met several times in an open meeting format during the planning process and the City held two public hearings to solicit public input on the plan. The Conservation Commission, Recreation Commission, Planning Board and Northampton City Council reviewed and approved the final document.

SECTION 3
COMMUNITY SETTING

REGIONAL CONTEXT

The City of Northampton contains approximately 35.7 square miles in Massachusetts and is mid-way between Connecticut to the south and Vermont to the north. The City is also mid-way between Albany, N.Y. to the west and the City of Boston to the east.

The City of Northampton is located on the west side of the Connecticut River and sits in the valley between that ancient waterway and the glacial formed hills to the west. The land nearest the Connecticut River has rich, fertile soils and a deep agricultural history. Adjacent to the fertile floodplains of the Connecticut River is the flat glacial outwash, which underlies much of the historic residential, commercial and industrial development in downtown Northampton and downtown Florence. Further to the west, where the elevation rises and the soil thins out, are the steep sloping hills composed of bedrock-dominated glacial till where the more recent residential development is occurring.

The City of Northampton is contained within the Connecticut River Watershed. The Connecticut River Watershed is the largest river ecosystem in New England and spans four states, including Vermont, New Hampshire, Massachusetts, and Connecticut. The river itself defines the eastern border of the City of Northampton. The many brooks and streams that flow through Northampton eventually find their way to the Connecticut River.

From its beginnings on the Canadian border to its end in Long Island Sound, the Connecticut River drains a landscape that is 11,000 square miles and 410 miles long. The river drops 2,400 feet from its source to the sea and is one of the most developed rivers in the Northeast. It enters Massachusetts through the Town of Northfield and flows through 45 communities before entering the state of Connecticut. The watershed is approximately eighty percent forested, twelve percent agricultural, three percent developed, and five percent wetlands and surface waters. The Connecticut River Watershed was designated the "Silvio O. Conte National Fish and Wildlife Refuge" by an act of Congress in 1991, the first refuge of its kind, encompassing an entire watershed ecosystem. The Connecticut River also received special attention in 1998 when it became one of only fourteen rivers in the U.S. designated as a National Heritage River.

While Northampton's natural neighbors are the Connecticut River and surrounding picturesque hills, its political neighbors are the towns of Westhampton to the west, Williamsburg to the north, Hatfield to the northeast, Hadley to the east, and the City of Easthampton to the south.

The City of Northampton has and continues to work with the neighboring communities to acquire water supply lands and jointly preserve forestland and watershed areas. The City of Northampton receives its primary water supply from surface water reservoirs in the towns of Conway, Williamsburg, and Hatfield.
Additionally, much of Hatfield's drinking water aquifer is located in Northampton, and the City of Northampton has aggressively regulated this area and acquired forestland to protect Hatfield's water supply.

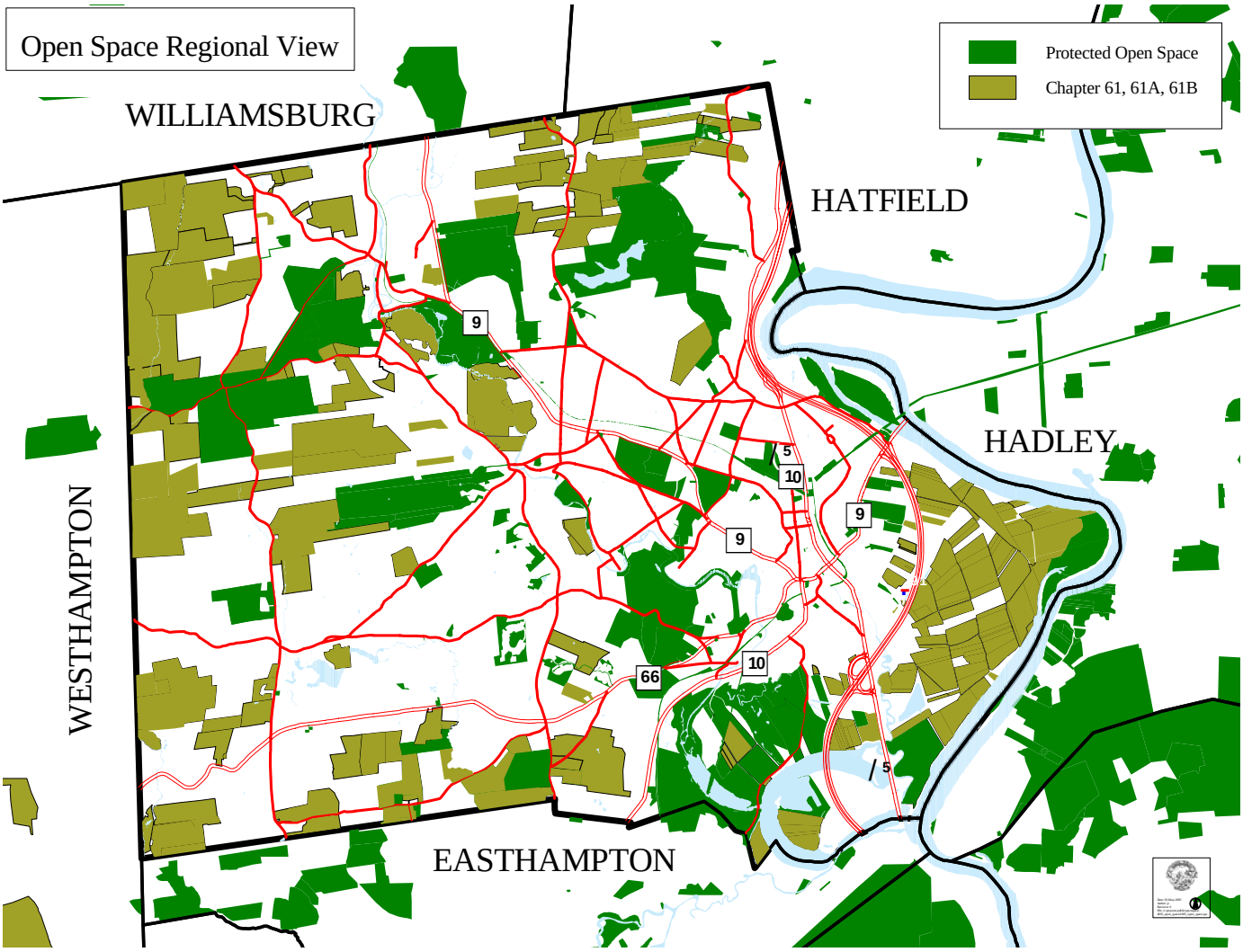
Contiguous forestland is important to Northampton and the neighboring communities. Forestland conserves water supplies by sustaining the soils ability to receive precipitation and recharge ground and surface waters slowly. Woodlands and their changing foliage give residents surroundings upon which to gaze and appreciate. Forests clean the air and provide cool air currents in warm months. Large blocks of contiguous forestland are important regional resources. Northampton like other cities in the Connecticut River Valley still contains many areas where the forests stretch to include thousands of acres of relatively pristine lands that cross political borders.

The map of open space in a regional context shows the open space holdings within Northampton and the surrounding communities (Open space in surrounding communities is based on the MassGIS layer and has not been verified.) Riverfront, agricultural, wetland, and upland resources all extend from Northampton into all neighboring communities.

The City of Northampton not only shares its resources with the neighboring communities, but also strives to engage in regional conservation and land protection efforts. The City has worked with the Town of Easthampton on joint open space acquisitions in the past and has worked with the Department of Conservation and Recreation to coordinate projects involving the Town of Hatfield. The Northampton Conservation Commission has identified additional opportunities for joint projects with the Towns of Hatfield, Williamsburg, Westhampton, and the City of Easthampton. Joint projects with the Town of Hadley are less likely to occur because the communities are separated by the Connecticut River, but Northampton and Hadley have worked together with the Department of Conservation and Recreation, the Division of Fisheries and Wildlife, and the Valley Land Fund, Inc. on projects concerning the Connecticut River.

Northampton has also worked with its neighboring communities on a series of projects designed to extend recreational facilities across political borders-a rail trail network that connects the City of Northampton to the adjoining communities. Currently, the city is the coordinating agency on a rail trail project with the City of Easthampton.

Northampton is also working with some of its neighboring communities on economic development efforts. The City of Northampton prepared a joint economic development strategy with the City of Easthampton and worked with the Town of Hatfield to develop a coordinated plan for development off Interstate 91-Exit 21, which is located on the Northampton/Hatfield town line.



Note: There are no Conservation Restrictions on the Department of Public Works Watershed Land

SOCIO-ECONOMIC CONTEXT

Northampton offers a sophisticated rural lifestyle that is rich in cultural, artistic, academic, and business resources. Northampton features one of the most vibrant downtown centers in New England and was named "Number One Best Small Arts Town in America" by author John Villani, and was recognized as one of the top 25 Arts Destinations in the nation by American Style magazine. The National Trust also named it as one of the Dozen Destinations of Distinction for Historic Preservation.

Residents see Northampton as both traditional and innovative. Several village centers provide focal points for outlying residential areas while the downtown is alive during the days and evenings. The City offers a wide selection of retail, services, restaurants, coffee and ice cream shops, theaters including the only municipally owned theater in the state, clubs featuring an array of music, street musicians and a Center

for the Arts. All of this activity provides a perfect atmosphere for casual strolling along the tree-lined streetscape.

The city also offers strong municipal programs in education, recreation, public safety and public works. It is known for its energy conservation program and its initiative to improve handicap access to downtown establishments.

The community has a strong and diverse economic base consisting of a mixture of traditional operations (wire protrusion, plastic molding) and innovative ones (production of heat sensing devises) and a large institutional base, which includes county services and two hospitals. Northampton is also home to Smith College, and is strongly influenced by Amherst College, Hampshire College, Mount Holyoke College and the University of Massachusetts as part of the five-college system in the region.

The superb quality of life in Northampton contributes to its strong economic base with growing manufacturing, technology and service sectors. The local labor force is diverse, well educated and highly skilled.

Any light pointed at Northampton still inevitably shines on the downtown. The City's downtown central business district has succeeded where many of its size across the nation have failed. The downtown serves as the cultural and shopping hub of Hampshire County and attracts tourists, gourmands, and residents from the region. Main Street retail vacancy rates remain low and the upper floors of Main Street buildings are largely filled with offices and residences.

Around the country, downtowns in similarly sized communities suffer from inattention, competition, and high commercial vacancy rates. The result is decay. Even in communities with healthy downtowns, success often means a bustling downtown from 9 a.m. to 6 p.m., with little evening and weekend activity. Northampton's downtown is hopping day and night, weekdays and weekends.

The lead role played by Northampton's downtown is not a new one. It has been the leading retail center for Hampshire County over the centuries. It has long served as a regional center and it has traditionally had the largest market share of retail spending. While downtown Northampton remains the most defined urban/retail center in the county, it has a smaller market share of total county retail spending now than in the past and a smaller market share of retail (non-restaurant) spending than the malls in Hadley. Per capita retail and restaurants sales for Northampton are significantly above those sales for Hampshire County and for the Springfield Metropolitan Statistical Area.

The city does pulse beyond Main Street. Vibrant service, commercial, and institutional sectors are found in the city's outlying villages of Florence, Leeds and Baystate.

Those looking can find a hearty commercial and residential pulse in Florence Center - the center of business and culture for many city residents and the surrounding hill towns. Florence's "village center," where homes, businesses and industry are all within walking distance of each other, is a highly praised feature of the village. This close physical proximity of homes and businesses produces a neighborliness that makes the village one of the most livable places in the Pioneer Valley.

Most of Florence's Main Street retail businesses serve local needs, such as pizza and groceries. Many businesses, however, also serve clients throughout Northampton and the region. Florence's successful village center fills a critical economic and social niche not provided in downtown Northampton (where

rents and density are too high) or on highway strip commercial areas. As in other village centers, Florence's businesses face stiff competition from regional commercial centers and strip commercial areas, such as King Street. Florence Center businesses have maintained a tradition of serving the commercial needs of local shoppers. That niche complements other commercial areas rather than competing with them.

Residents believe Northampton has a rich history and are confident that it's future will be built on its diverse population base, solid economy and abundant resources.

City of Northampton Demographic Indicators

Percent of the Population who are:	% in Northampton	% in MA
Living in urban areas	87.7	88.8
Living in rural areas	12.3	8.6
Under age 18	16.8	23.6
Age 65 and over	13.7	13.5
White	89.7	84.5
Black/African American	1.9	5.3
Asian	3.2	3.8
Hispanic	5.1	6.7
immigrated 1990-2000	2.6	4.9
Speak only English at home	87.5	81.3
Speak Spanish at home	4.8	6.2
Speak other Indo-European language at home	5.3	8.9
Speak Asian language at home	1.7	2.9
Percent of housholds that are:		
Married couples	37.4	50
Single parents	12.3	15
Non-family	12.8	7.1

-Pioneer Valley Planning Commission Factbook 2002

City of Northampton Housing Indicators

Percent of housing units with:	% in Northampton	% in MA
Owner occupancy rate	53.5	61.7
Vacancy rate	3.1	3.1
No vehicle available	11.3	12.7
No telephone service	0.9	0.9
Inadequate plumbing	1	0.7
Inadequate kitchen	1.4	0.8
Median year housing built	1946	1956
Average household size	2.14	2.51
Median gross rent	$647	$684
Rent as % of income	25	26
Median owned-home value	$144,600	$185,700
Median monthly owner costs	$1,171	$1,353
Owner costs as % of income	$21	$22

-Pioneer Valley Planning Commission Factbook 2002

HISTORY OF NORTHAMPTON

For thousands of years, Native Americans camped and fished along the rich floodplains of the Connecticut River in what is now called the Pioneer Valley.

Northampton's founders, though strongly Puritan in conviction, were drawn to the area more by accounts of abundant tillable land and ease of trade with the Indians than by the religious concerns that characterized their brethren in eastern Massachusetts. In May 1653, 24 persons petitioned the General Court for permission to plant, possess and inhabit the land called “Nonotuck." Northampton was settled in 1654 on a low rise above the rich meadowlands by the Connecticut River. Relations between settlers and Native Americans, though initially cooperative, became increasingly strained, culminating in King Philip's War in 1675.

Though Northampton grew as a trade and marketing center in the 18th century, religious fervor was quickened by the ministry of Jonathan Edwards whose preaching sparked the religious revivals of the Great Awakening in the 1740's. The Revolutionary War produced heroes like General Seth Pomeroy. The economic upheavals in the wake of the war moved Daniel Shays and his followers into open rebellion on the eve of the Constitutional Convention. A delegate to the Convention, Caleb Strong became Massachusetts’s first senator and an eleven-term governor.

In the early 19th century, great hopes were raised by the prospect of the Northampton-New Haven Canal, but shareholders never recouped their investment and the coming of the railroad signaled the end of the company. Other industries grew and prospered, including the utopian community of the Northampton Association, which combined radical abolitionism with a communally owned and operated silk mill.

Sojourner Truth was, at one time, a member of that community which included William Lloyd Garrison and Frederick Douglass among its circle of supporters. Other reformers included Sylvester Graham, diet and health food enthusiast and inventor of the Graham cracker, and abolitionist Lydia Maria Child.

19th century Northampton drew visitors like Timothy Dwight, the Marquis de Lafayette, Henry James, Ralph Waldo Emerson and Jenny Lind who proclaimed it to be the "paradise of America." Indeed, artists like Thomas Cole thought the environs of Northampton to be the epitome of the "picturesque" - the ideal middle landscape between the sordid city and wild nature.

Northampton was the site of a number of schools and educational institutions. Historian George Bancroft established the Round Hill School in 1823 and Smith College opened its doors in 1871. Author George Washington Cable founded the Home Culture Clubs in 1892, and the Hill Institute sponsored one of the earliest kindergartens in America. The Northampton Law School sent one of its students, Franklin Pierce on to the Presidency. Northampton was also the home of Calvin Coolidge, who became President in 1923.

The 19th Century diva, Jenny Lind, didn't call this city "paradise" for nothing. Jenny dubbed Northampton "paradise" after a long stay here, and ever since then, some residents, with little humility and a dash of booster enthusiasm, have decided to keep the moniker, calling the community "Paradise City."

Northampton's streets follow, essentially, the same paths that were laid out in the 17th century and there are a number of surviving 18th century structures in and around Northampton. The downtown district retains its 19th century character. The modest fortunes of local merchants and industrialists financed numerous Victorian mansions and picturesque cottages as well as the commercial blocks in the Downtown Historic District. Northampton possesses two fine 19th century residential neighborhoods, Pomeroy Terrace (1850-1885) and Elm Street (1860-1920), where Gothic Revival, Italianate, Second Empire, Queen Anne and Colonial Revival Styles contribute to the City's diverse architectural heritage.

Northampton's economy has changed significantly since the end of World War II. The industrial component of the economy, once the linchpin, has receded. In its place, the commercial and service sectors of the economy have grown.

The city's economy used to be heavily dependent on two major institutions, the former Northampton State Hospital and the U.S. Veterans Affairs Medical Center. The Northampton State Hospital closed in 1994 and the Veterans Medical Center, until recently, had been shrinking over the past thirty years. Smith College, the other large private institution in the City, has remained stable in employment while its physical plant has grown. Nearby, the University of Massachusetts at Amherst has remained relatively stable for the past twenty years.

For an artist, a gourmand, a bicyclist or a parent, the city just might be paradise. Authors of numerous magazine articles and books have named Northampton one of the best places in the country to raise children, ride bicycles, eat out in restaurants and make a life as an artist.

While residents of other communities across the nation might quibble with Northampton's self embrace of "the best place" in which to raise a child or "the best small arts town," no one can argue that Northampton is rich in history in the Pioneer Valley.

NORTHAMPTON POPULATION CHARACTERISTICS

	Population 1970 (# of People)	Population 1980 (# of People)	Population 1990 (# of People)	Population 2000 (# of People)
Massachusetts	5,689,377	5,737,037	6,016,425	6,349,097
Hampshire County	123,997	138,813	146,568	152,251
Northampton	29,664	29,286	29,289	28,978

Population for Northampton, Hampshire County, and Massachusetts 1970-2000
Sources: U.S. Census 1970, 1980, 1990, 2000

Northampton has a population of approximately 30,000 people, with a population density of 840 people per square mile. The population has remained stable since 1950. While the total population of households has been increasing for the past thirty years, it has been offset by the decrease in the population in from the State Hospital and the Department of Veterans' Affairs Medical Center.

Although changes in major institutions, like, Smith College, the U.S. Department of Veterans' Affairs Medical Center, Clarke School for the Deaf, and the Hampshire County Long-Term Care Facility, affect the population characteristics of Northampton, we expect to see a slight growth in Northampton's population — approximately 2.5% per decade — because the household population keeps growing and the viability of the city's major institutions is now stable, except for the Veterans' Affairs Medical Center, which may continue to decline.

Because of enrollment at Smith College, there are significantly more women than men between the age of 17 and 24. From ages of 25 to 65, there is approximately the same number of men as women. After age 65, women outnumber men, because men tend to suffer from significantly higher mortality rates in the 65 and over age bracket.

The Age-Sex Distribution graph, or population pyramid, shows that Northampton, like many regions of the country, has an aging population. There are significantly fewer people per age range in the ranges less than 19 years versus the ranges between 20 and 44.

	Massachusetts Population		Hampshire County Population		Northampton Population	
Age Cohort (years)	**1990**	**2000**	**1990**	**2000**	**1990**	**2000**
0-19	1,561,017	1,675,113	39806	40506	6664	6395
20-44	2,530,390	2,394,062	66952	59568	13698	11650
45-64	1,110,013	1,419,760	22813	33850	4661	6940
65+	815,005	860,162	16997	18327	4266	3993

Source: U.S. Census Bureau: Census of Population and Housing 1990 and 2000

Although Northampton's overall population has not increased significantly, a dramatic decrease in family size has created a corresponding increase in the number of households and, therefore, the number of housing units. Furthermore, increases in unit size, e.g., two family homes being converted into single family homes, are driving the need for new housing construction without new residents. While this trend exists in most U.S. communities, the combination of this trend and a major decrease in the number of people living in institutions has fueled most of the last 30 years of residential development.

The migration rates of people moving into and out of Northampton are high, but in- and out-migrations well balanced. College-age students contribute to the population turnover, but there is also a significant amount of turnover at other age levels. This turnover potentially reduces the sense of stability or a residents' commitment to their neighborhood, but also contributes to the vibrancy of Northampton.

	Northampton 2000	Northampton 1990	Commonwealth Current
Total Households	11,880	11,164	2,443,580
Median Age	37	30 to 34	37
Median Household Income	$41,808	$41,954	$50,502
Per Capita Income	$24,022	$19,2443	$25,952

U.S. Census Bureau, 2000 Census and 2004 Population Estimates
Table from Northampton Community Indicators, March 2006 PVPC

According to November 2005 figures, Northampton has an unemployment rate of 3.4%, which is a lower rate than 255 of the 351 towns in Massachusetts and is lower than the unemployment rate of the State of Massachusetts at 4.4%. The sector with the highest number of employees is the service sector, which includes health care and education (63.5%). It also employs a higher percentage than the State. The next highest is retail/whole trade at 14.6%, which is 8.7% less than the total employment in Northampton in this sector in 2000. Northampton continues to see a decline in the number of people employed in the government, manufacturing, construction, information and management sectors between 2001and 2004. Only the construction and government sectors are doing worse than the state average; all other sectors fair better than the Commonwealth as a whole. The percentages of people who are self-employed, work from home, and are part time continue to be greater than the State.

Year	Community	Labor force	Employment	Unemployment	Unemployment rate
1999	Northampton	15,852	15,480	372	2.3
	Massachusetts	3,355,324	3,245,761	109,563	3.3
2000	Northampton	17,119	16,777	342	2
	Massachusetts	3,366,582	3,276,737	89,845	2.7
2001	Northampton	17,154	16,726	428	2.5
	Massachusetts	3,400,624	3,274,561	126,063	3.7
2002	Northampton	17,298	16,742	556	3.2
	Massachusetts	3,427,900	3,247,094	180,806	5.3
2003	Northampton	17,248	16,581	667	3.9
	Massachusetts	3,413,782	3,215,624	198,158	5.8
2004	Northampton	17,259	16,623	636	3.7
	Massachusetts	3,393,122	3,219,487	173,635	5.1

Source: Northampton Community Indicators, March 2006 PVPC

Approximately 51% of employed Northampton residents work in Northampton. Most of the remaining 49% of the employed residents commute out of the city, mostly to Amherst and cities and towns in Hampden County. Northampton residents fill slightly over half of the available jobs in Northampton (U.S. Census Bureau, 2000 Journey-to-Work statistics, prepared by PVPC).

The number of people who live within walking distance of downtown is high for a city the size of Northampton. Approximately 39% of Northampton's population lives within one mile of the center of downtown.

POPULATION 2000 (AS % OF CITY)

AREA	POPULATION	% OF CITY POPULATION
City of Northampton	28,978	100%
Live within one mile of center of downtown	11,235	38.8%
Live within one-half mile of center of downtown	5,674	19.6%
Live in or abutting Central Business District	935	3.2%
Live within one mile of Florence Center (based on historic destination)	5,106	17.6%
Live within one-half mile of Florence Center	3,327	11.5%

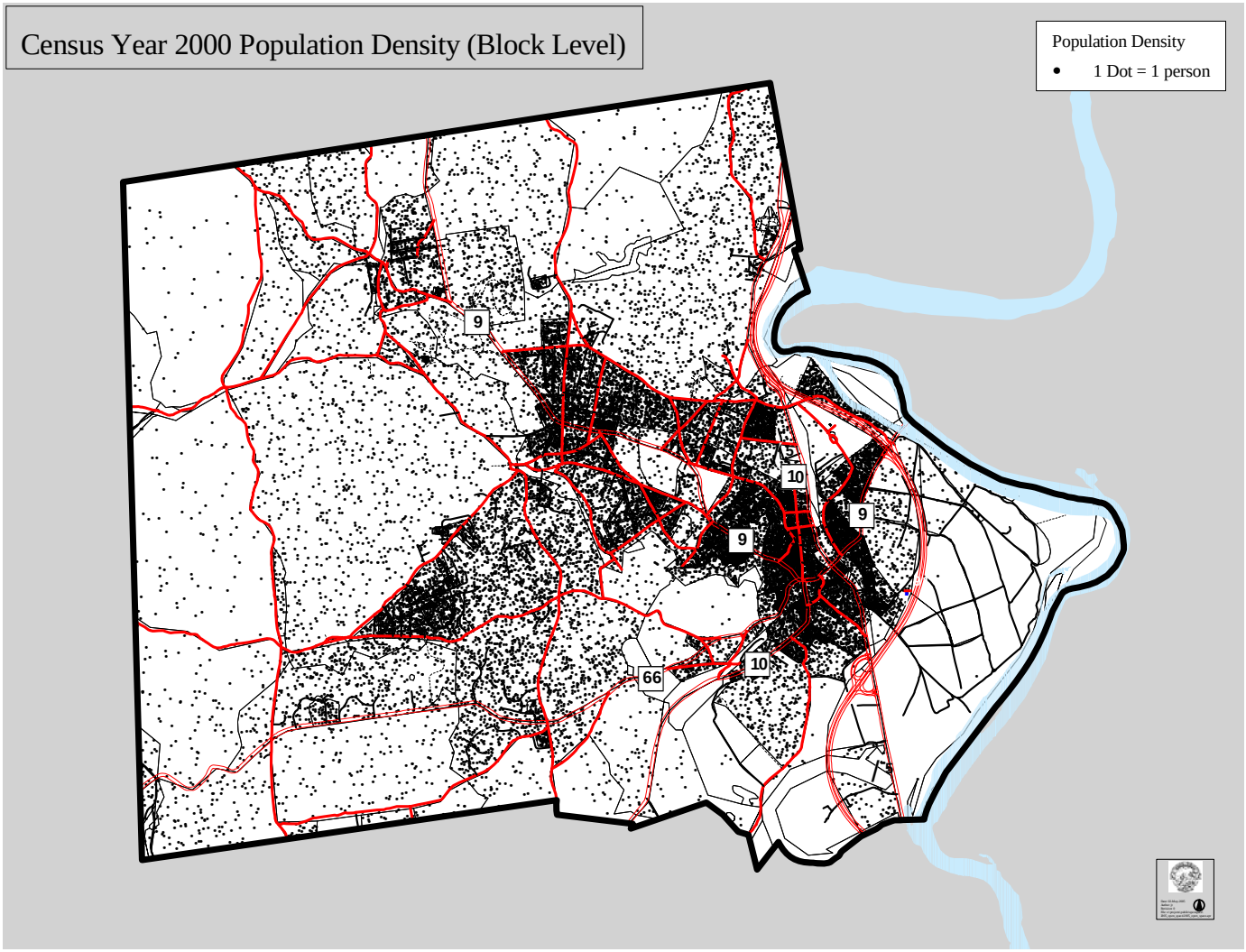
Source: 2000 U.S. Census Block Data

This downtown population, especially with the wide variety of incomes that exist, may be the most important single factor in allowing for a healthy downtown. This population provides a base of customers for downtown businesses and helps provide the vibrancy that is critical to the health of downtown. It also generates a need for a variety of housing types and opportunities.

RENTAL HOUSING (AS % ALL UNITS)

City of Northampton	46.5%
Within 1 mile of downtown	68.4%
Within 1/2 mile of downtown	80.8%

Source: 1990 U.S. Census. The presence of Smith College does skew these figures. These figures include all non-dormitory Smith College housing.



GROWTH AND DEVELOPMENT PATTERNS

The terrain of Northampton ranges from the flat Mill River and Connecticut River floodplains to the moderately steep hills along its western and northern boundaries. The hills are covered with shallow ledge and soils and topography poorly suited for development. Most development in Northampton has occurred in the areas bordering the floodplain and below the steeper hills. Although Northampton looks "built-out" from many of the roads, the majority of the city's land area has not been developed.

Most of the city's development occurred in a corridor along the Mill River and other level areas of the city northeast of the Mill River. Downtown Northampton, Bay State, Florence, and Leeds are all located within one mile of the Historic Mill River (in 1939 the Mill River was diverted from downtown to control floods).

TRANSPORTATION SYSTEMS

Northampton is located in the Pioneer Valley, known as the crossroads of New England because of its strategic position along the Connecticut River and its excellent transportation facilities. The Massachusetts Turnpike connects the region to Boston and to Albany, New York. Interstate 91 provides direct access to Hartford, Connecticut, and to Brattleboro and points north in Vermont. The principal highways are U.S. Route 5 and Interstate Route 91, which runs N-S across the state, the State Route 9 running E-W. Amtrak offers daily bus service between Burlington, Vermont, and Springfield, Massachusetts, which connects up to its Springfield-Washington rail service. Freight rail service is available from the Springfield Terminal Railway. Northampton is a member of the Pioneer Valley Transit Authority (PVTA), which provides fixed route service, and offers para-transit service to Springfield, Worcester, Boston, and Hartford. The Franklin Transit Authority also has a bus service that runs from Greenfield to Northampton. Vermont Transit Lines connects to Greenfield, Brattleboro, VT and points north, and to Holyoke, Springfield and Hartford, CT. Peter Pan Bus Lines also offers direct service to 56 destinations, including Boston, New York City, Washington, DC, Baltimore, and Philadelphia.

In addition, Peter Pan offers service to Logan Airport from Northampton 7 days a week, and connects from Springfield to Hartford and Bradley Airport, and to Kennedy and Laguardia Airports in New York City.

Northampton Airport, previously known as LaFleur Airport, is a General Aviation (GA) facility located 1 mile northeast of downtown Northampton, and has a 3,506-foot by 50-foot asphalt runway. This airport has been in continuous operation since its inception in 1929.

The City of Northampton consists of approximately 150 miles of paved streets, 15 miles of unpaved (gravel) public ways, 70 miles of sidewalks and crosswalks, 20 bridges, and 3 miles of bicycle paths.

The percent of workers walking to work for Northampton is 13.7%, which is significantly greater than the average for the State of Massachusetts. On the other hand, less people use public transportation to get to work and the percent of occupied dwelling units with no car available is less than the State average.

WATER SUPPLY SYSTEMS

In 2005, approximately 98% of Northampton's drinking water came from three surface water reservoirs. The system draws unfiltered water from reservoirs located in the hill towns and the water is piped to Northampton through transmission lines.

The water is chlorinated prior to reaching Northampton to prevent dangerous levels of coliform and bacteria from entering the water supply lines. Once the water reaches Northampton, it is treated at the Corrosion Control Facility in Leeds. This treatment includes the addition of Zinc Orthophosphate and Sodium Hydroxide. These chemicals are added because Northampton's source water, like many other drinking water supplies in New England, is naturally corrosive (having a pH of less than 7.0). This means the water supply has a tendency to corrode and dissolve the metal piping it flows through. This not only damages pipes, but can also add harmful metals such as lead and copper to the water. For this reason, it is beneficial to add chemicals that protect the pipe coating and make the water's pH neutral or slightly alkaline. Northampton adds Zinc Orthophosphate, which is often referred to as an inhibitor to coat the inside of the pipe. It contains a small concentration of phosphate. Northampton also adds sodium hydroxide, which raises the pH to a non-corrosive level. Testing conducted throughout the water system in 2005, has shown that this treatment is effective at reducing lead and copper concentrations.

In 2005, the City of Northampton supplied approximately 1.23 billion gallons of water to the residents. On average, the city supplied 3.38 million gallons of water each day. However, the most water used in one day was 4.86 million gallons. On large water withdrawal days, water is drawn from the two wells located in Florence. The City of Northampton has approximately 150 miles of water pipes, 1000 water valves, 1200 fire hydrants and 8000 water meters.

In 2003, the Department of Environmental Protection (DEP) completed a Source Water Assessment Program (SWAP) Report. This report included a review of the watershed lands and aquifer protection zones. The largest threats to the water supply identified in the report were from residential fuel storage and large scale commercial uses.

In December of 2001, the City signed a Consent Order with the Department of Environmental Protection (DEP). The Consent Order required construction of a water filtration plant to begin in the spring of 2003, and be operational by August of 2005. After many permitting delays, construction began in December 2005. The plant should be completed and operational within two years. Until then, the Department of Public Work's Water Division continues to protect, chlorinate and monitor the water supply and watershed land in compliance as required.

WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEMS

The Northampton Wastewater Treatment Plant is an 8.6 Million Gallon Per Day secondary wastewater treatment plant serving approximately 31,000 people in Northampton and an additional 425 people in the Town of Williamsburg. In addition, there are nine non-categorical, significant industrial users (SIU's) in the sewered community. The Waste Water Treatment Plant consists of the following treatment units:

PRELIMINARY TREATMENT:

- Pre-chlorination
- Bar rack
- Grit tank
- Comminutor
- Parshall flume

PRIMARY TREATMENT:

- Primary clarifiers (3)
- Lift pumps

SECONDARY TREATMENT:

- Aeration tanks with diffused air
- Secondary clarifiers (3)

DISINFECTION

- Chlorination with sodium hypochlorite (flow paced)
- Chlorine contact tank

OUTFLOW:

- Discharge to Connecticut River via outfall pipe or Mill River bed during high Connecticut River flows

SLUDGE TREATMENT:

- Sludge holding tanks
- Sludge thickeners
- Gravity belt thickening
- Filter press
- Sludge cake disposal

The discharge normally outfalls to the Connecticut River, but there are occasions when the Connecticut River is in a high flow stage and discharge is sent to the Mill River bed canal prior to being released into the Connecticut River.

The original plant was designed in 1973 (Whitman & Howard Engineers) and upgraded in 1998.

The facility accepts industrial wastewater from nine significant industrial users (SIUs) including:

- The Minute Maid Company (~40,000 gpd: fruit juice)
- Cooley-Dickinson Hospital (~10,000 gpd: hospital wastes)
- Kollmorgen Corporation, Electro-Optical Division (~0-50,000 gpd: submarine periscopes)
- Packaging Corporation of America (~3,000 gpd: manufacturing and printing of corrugated containers)
- Perstorp Compounds, Inc. (~500 gpd: urea and melanine molding compounds)
- Pro-Corporation- PMC (~1,800 gpd- sanitary only: injection molding)
- Saint Gobain/Norton Company (~100 gpd: pumice slurry)
- Techalloy Co./Northampton Wire Plant (~1,400 gpd- sanitary only: stainless steel wire)
- Department of Veterans Affairs Medical Center (65,000gpd: lab wastes)

The Northampton Waste Water Treatment Plant generated 1,127 dry metric tons of sludge in 1999. Sludge is treated by: gravity thickening and gravity belt thickening; belt filter press; chlorination of primary and waste activated sludge is optional; lime stabilization; sludge cake goes to Northampton Regional Landfill.

The City of Northampton has approximately 100 miles of sewer pipes and 2400 manholes.

POTENTIAL DEVELOPMENT CONSTRAINTS

Budget constraints and the geographic boundaries of the current infrastructure systems pose a constraint on commercial, industrial and some residential expansion, especially large-scale uses. In the absence of sewer lines, development must rely on septic systems for their wastewater treatment needs. The reliance upon septic systems poses a problem in some undeveloped areas of Northampton – shallow soils and bedrock are incapable of absorbing large quantities of effluent.

The potential for Northampton to accommodate new large-scale commercial or light industrial land uses may also be restricted by the city's limited water system infrastructure. Many commercial and light industrial uses require large quantities of water and produce large discharges that must comply with environmental regulations and provide adequate protection for natural resources. Access to adequate water and sewer infrastructure can be particularly critical with respect to industrial uses to prevent hazardous materials from entering the groundwater. The Massachusetts Department of Environmental Protection usually requires most industrial firms to obtain an industrial wastewater discharge permit and to hook up to a wastewater treatment facility.

Upgrading and extending water and sewer lines outside of the currently developed areas to proposed locations for commercial or light development may not be feasible due to the high costs involved. Funding from outside sources such as the Federal Economic Development Administration (EDA) may be necessary to subsidize the development of infrastructure to planned industrial/commercial areas in the City. The improvements to the roadway network, community water system, and wastewater treatment plant and collection system will have a great impact on future development patterns. Upgrades of existing

water and sewer lines may encourage infill development for greater concentrations of commercial, industrial, and large scale residential uses near current village center areas, and may limit large-scale development in agricultural and environmentally sensitive areas. On the other hand, sewer and water line expansion may result in an increase in industrial/commercial corridor development within the City.

DEVELOPMENT PATTERNS

Most non-agricultural development in Northampton is located outside of the Connecticut River floodplain because of the potential for flood damage. During the last two or three decades the agricultural economy of Massachusetts has declined, resulting in the loss of some marginal farms, both on and off the floodplain.

Since World War II, much of the previously rural areas have been transformed to suburban residential development. Today, development continues along the Northampton-Florence-Leeds corridor and rural areas outside the corridor. Commercial development has spread from the original Northampton-Florence corridor to include extensive strip and shopping plaza development on King Street, a former rail yard, and North King Street. Industrial uses in the Northampton-Florence-Leeds corridor, and especially along the Mill River, have shrunk. That industrial contraction has been offset, in part, by industrial development in the Northampton Industrial Park. Residential development has also changed, with suburban development transforming the Ryan Road, Burts Pit Road, Florence Road, Westhampton Road areas, the development of apartment complexes north of downtown, and scattered housing in every corner of Northampton.

Even with the changes, clear lines still exist between urban, "small town," suburban, and rural areas. Northampton remains a city with a strong sense of both community and place. The development pattern has been shaped by the strength of the urban centers of Northampton and Florence, the King Street shopping areas, the strong character of the residential neighborhoods, and the existence of large tracts of public and quasi-public land, including the Northampton State Hospital, Smith College, Arcadia Wildlife Sanctuary, Smith Vocational and Agricultural School, Look Memorial Park, Northampton Reservoir watershed lands, and the Veteran's Administration Medical Center.

NORTHAMPTON LAND USE

Land Use--1985	**Acres**	**Land Use--1999**	**Acres**
Forest Land (other than protected land)	12,306	Forest Land (other than protected land)	11,607
Agricultural Land (other than protected land)	3,385	Agricultural Land (other than protected land)	3,176
Developed Land	1,264	Developed Land	1,177
Residential Land	3,414	Residential Land	4,236
Water/Recreational/Openland	2,478	Water/Recreational/Openland	2,652
Total	22,847	Total	22,848

Source- MassGIS Data

LAND USE CONTROLS

The City of Northampton has adopted zoning and land use controls to lessen congestion in the streets; to

conserve health; to secure safety from fire, flood, panic, and other dangers; to provide adequate light and air; to prevent overcrowding of land; to avoid undue concentration of population; to encourage housing for persons of all income levels; to facilitate the adequate provision of transportation, water, water supply, drainage, sewerage, schools, parks, open space and other public requirements; to conserve the value of land and buildings, including the conservation of natural resources and the prevention of blight and pollution of the environment; to encourage the most appropriate use of land throughout the City, and to preserve and increase amenities by the promulgation of regulations to fulfill said objectives. The following are some of the land use controls adopted by the City of Northampton:

1) Open Space Residential Development-For residential development in a clustered concept (a concept whereby the residences are clustered on a portion of the lot, thereby leaving more of the parcel undeveloped and in open space, the purpose of which is to: a) preserve the rural character of the community by maximizing and preserving expanses of open space in their natural state; b) provide a buffer between developments, and; c) serve a functional relationship to each of the lots in the development

2) Planned Unit Development-for mixed residential, business, and institutional developments with extensive open space areas.

3) Residential Incentive Development Overlay District- to provide housing opportunities that are affordable for low and moderate-income persons.

4) Planned Village District-to encourage economic diversity and vitality, to foster the creation of a village or campus center with coherent development patterns similar to traditional Northampton development, to provide for an environment conducive to a high quality of life, to avoid unnecessary public expense for the extension of services, and to meet other community goals.

5) Special Conservancy District-to protect the public health and safety, persons and property against the hazards of seasonal and periodic flooding; to protect the entire community from individual choices of land use and development which require subsequent public expenditures for public works and disaster relief; to provide that lands in the City of Northampton subject to seasonal or periodic flooding as described hereinafter, shall not be used for residential or other purposes in such a manner as to endanger the health or safety of the occupants thereof; to assure the continuation of the natural flow pattern of the watercourses within the City of Northampton in order to provide safe and adequate floodwater storage and conveyance capacity, to protect persons and property against the hazards of flood inundation, including damage from erosion and increased flood heights and velocities; to protect, preserve and maintain the water table and water recharge areas with the City so as to preserve present and potential water supplies for the public health and safety of the residents of the City of Northampton; to provide for the continued functioning of the river flood plain/wetlands as a natural system. The object and required is to avoid activities in the flood plain/wetlands which would interfere with natural food chains that support a myriad of living things recognizing that they serve mankind and all other life in assimilating waste, producing food, conserving water, and maintaining stability which has been called the balance of nature. Proper use of the flood plain/wetlands is considered to be such as would secure these benefits to all its users.

6) Watershed Protection District- To preserve and protect the streams and other watercourses in the City of Northampton and their adjoining lands; to protect the health and safety of persons and property against the hazards of flooding and contamination; to preserve and maintain the ground water table for water

supply purposes, and protection of adequate base flows of streams and rivers; to protect the community against the detrimental use and development of lands adjoining such watercourses; to conserve the watershed areas of the City of Northampton for the health, safety, and welfare of the public.

7) Water Supply Protection District- to promote the health, safety and welfare of the community by protecting and preserving the public drinking water resources of Northampton from any use of land or structures which reduce the quality or quantity of its public drinking water resources.

8) Farms, Forests and Rivers Overlay District-To protect sensitive open space and ecologically important features, to preserve the farms, forests and river corridors of Northampton, and to allow landowners the ability to develop their property in a manner that is sensitive to these unique resources.

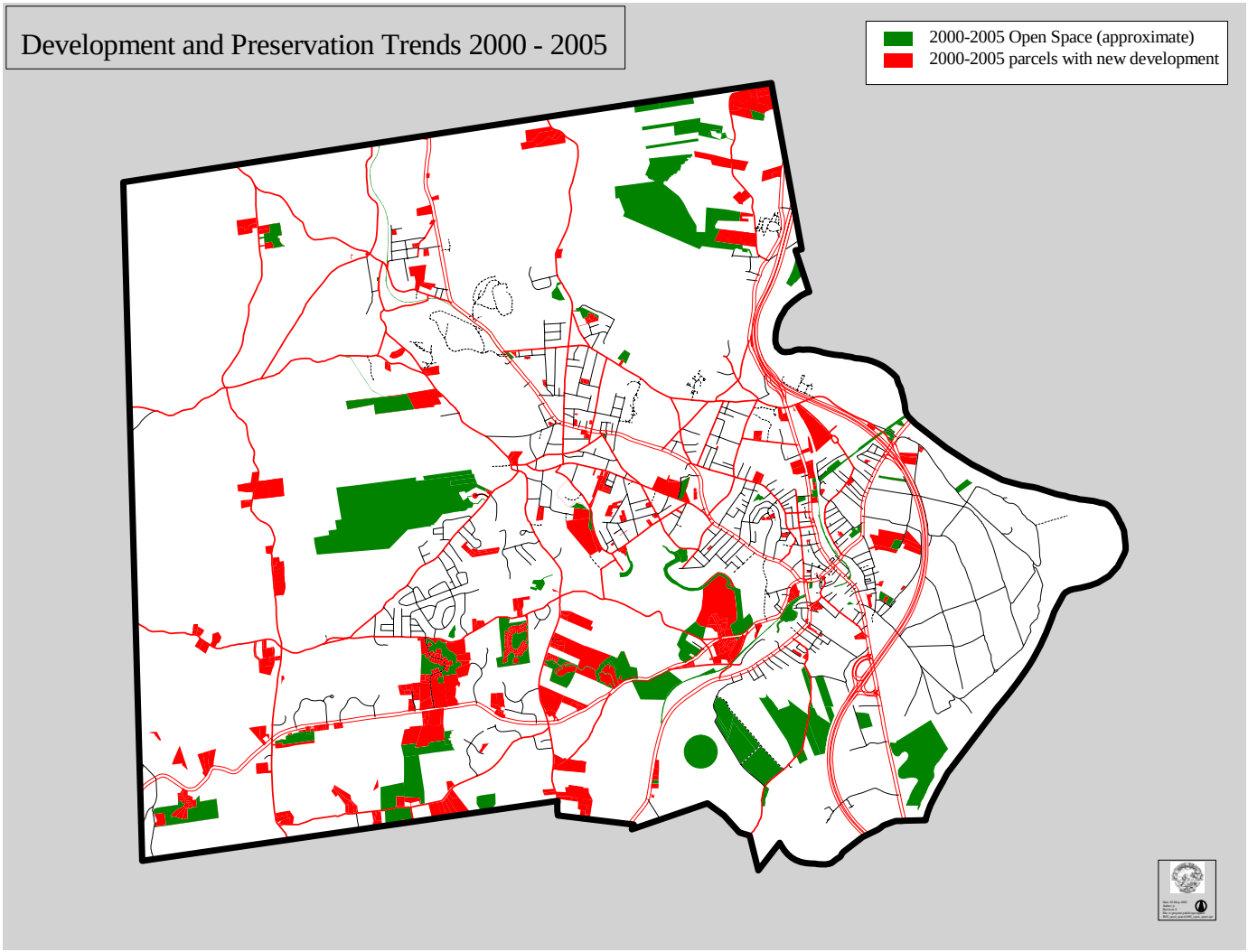
BUILD OUT ANALYSIS

The term "buildout" refers to a state reached by a community when no additional development is possible. In other words, the term means the community has reached its maximum potential for additional development since every piece of land is either already developed or permanently protected, or is prohibited from being developed due to constraints on development.

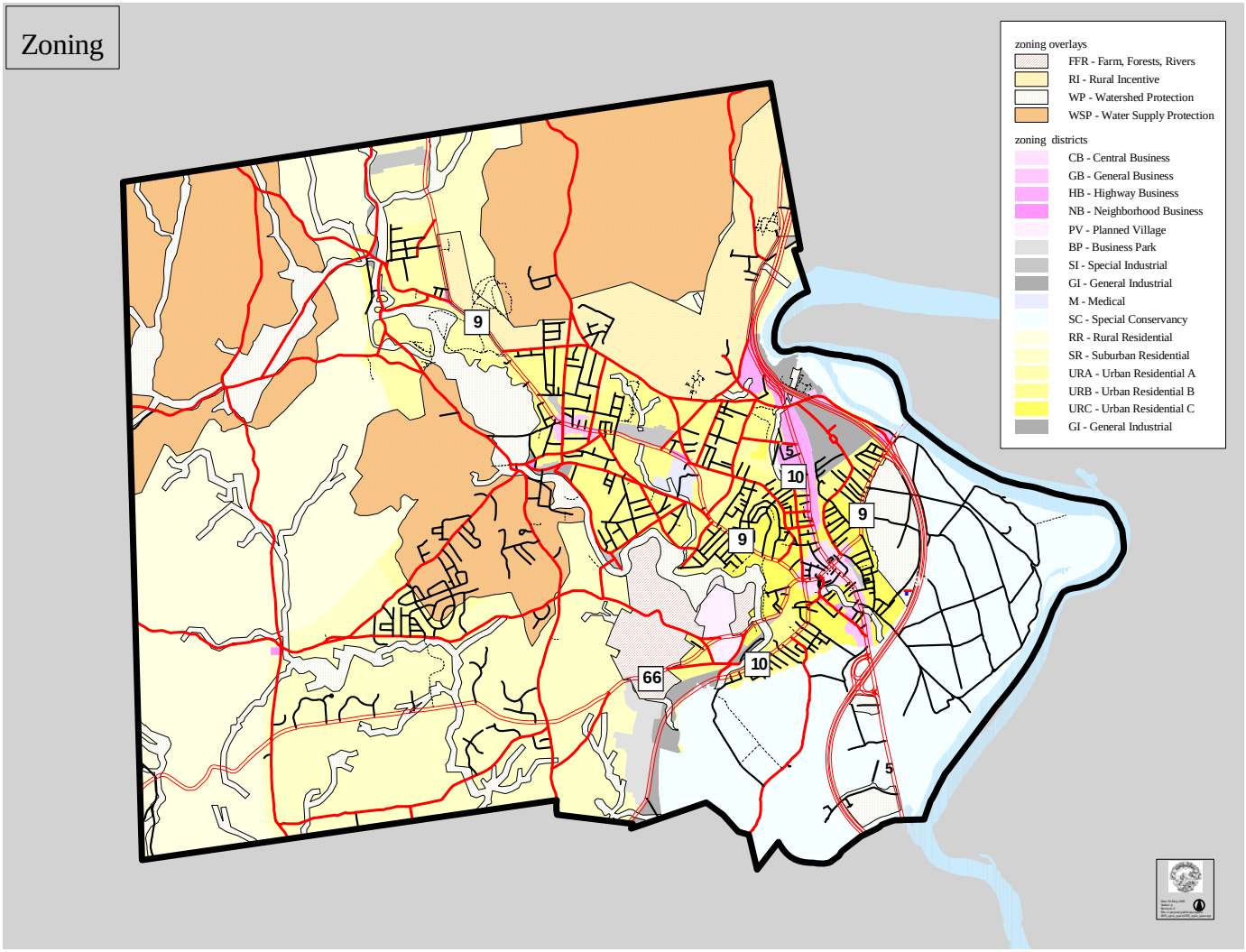
A buildout analysis provides a vision of future growth that the communities are inviting or requiring through their zoning and other land use regulations. The analysis indicates to a community where, what type, and how much growth it can expect at some point in the future.

TOTAL NORTHAMPTON ACRES: 22,879
TOTAL DEVELOPABLE ACRES: 12,604

Zoning District	ACRES of Developable Land	Percentage of Total Developable
Business Park	112	1
Central Business	4	0
General Business	6	0
General Industrial	164	1
Highway Business	15	0
Medical	1	0
Neighborhood Business	1	0
Rural Residential	6232	49
Special Conservancy	1696	13
Special Industrial	61	0
Suburban Residential	2378	19
Urban Residential A	949	8
Urban Residential B	311	2
Urban Residential C	119	1
Percent 'not in a zone' in the buildout map (4% error)	557	4
TOTAL (another 2% error)	12604	98



Source: EOEA Buildout Analysis, 2001


Zoning
zoning overlays
FFR - Farm, Forests, Rivers
RI - Rural Incentive
WP - Watershed Protection
WSP - Water Supply Protection
zoning districts
CB - Central Business
GB - General Business
HB - Highway Business
NB - Neighborhood Business
PV - Planned Village
BP - Business Park
SI - Special Industrial
GI - General Industrial
M - Medical
SC - Special Conservancy
RR - Rural Residential
SR - Suburban Residential
URA - Urban Residential A
URB - Urban Residential B
URC - Urban Residential C
GI - General Industrial
9
5
10
9
9
66
10
5

SECTION 4
ENVIRONMENTAL INVENTORY AND ANALYSIS

GEOLOGY, SOILS, TOPOGRAPHY

TOPOGRAPHY

Northampton's land is a three-part geological story. There is the alluvial/ lacustrine floodplain, which includes approximately 3,000 acres of farmland and floodplain forest along the Connecticut River. There is the deep, flat glacial outwash, which underlies much of Baystate, downtown Florence and downtown Northampton. Finally, there is the rolling glacial till in Leeds and in the areas where most of the recent residential development has occurred and the steeply sloping bedrock-dominated glacial till in the hills on the north and western ends of town where development is much more limited. Elevations range from 99 feet mean sea level (MSL) on the Connecticut River to 890 feet MSL on the hills in the western side of town. To the southeast of Northampton are the Mt. Tom and Mt. Holyoke mountain ranges, running in a unique east-west oriented boomerang shape. These mountains define the northerly limit of the Springfield-Chicopee-Holyoke metropolitan area and help define the Northampton area and Hampshire County.

GEOLOGY

The City of Northampton as we know it today is the result of millions of years of geologic history: great upheavals of the earth's crust and volcanics, and the sculpting power of moving water, ice and wind. This distinctive physical base has determined the distribution of the town's water bodies, its soils and vegetation and its settlement patterns, both prior to and since colonial times. Understanding Northampton's current landscape requires a brief journey back in time and a review of some basic geological concepts.

The earth's crust is a system of plates whose movements and collisions shape the surface. As the plates collide, the earth's crust is compressed and forced upward to form great mountain ranges. In the northeastern United States, the plates move in an east-west direction, thus the mountains formed by their collisions run north to south.

The pressure of mountain building folded the earth, created faults, and produced the layers of metamorphosed rock typically found in New England. Collision stress also melted large areas of rock, which cooled and hardened into the granites that are found in some of the hill towns in Massachusetts today. Preceding the collisions, lines of volcanoes sometimes formed, and Franklin County shows evidence of this in bands of dark rock schist metamorphosed from lava flows and volcanic ash.

Hundreds of millions of years ago, a great continent, known as Pangaea, formed through the collisions of plates. Pangaea began to break apart almost 200 million years ago, and continues to do so as the continents drift away from each other today. This "continental drift" caused earthquakes and formed large rift valleys, the largest of which became the Atlantic Ocean. The Connecticut Valley was one of many smaller rifts to develop. Streams flowing into the river from higher areas brought alluvium, including gravels, sand and silt. At the time, the area that is now the Town of Northampton was located south of the equator. The Dinosaur era had begun, and the footprints of these giant reptiles are still visible in the rock

formed from sediments deposited on the valley floor millions of years ago.

By the close of the Dinosaur age, the entire eastern United States, including Northampton, was part of a large featureless plain, known as the peneplain. It had been leveled through erosion, with the exception of a few higher, resistant areas. Today, these granite mountaintops, called monadnocks, are still the high points in this region. Local examples include Mt. Wachusett, Mt. Greylock, and Mt. Monadnock in New Hampshire.

As the peneplain eroded, the less resistant rock eroded to form low-lying areas, while bands of schist remained to form upland ridges. By this time, the Connecticut Valley had been filled with sediment, while streams that would become the Deerfield, Westfield, and Farmington Rivers continued to meander eastward. The westward-flowing streams would become more significant later on.

A long period of relative quiet in geologic terms followed the Dinosaur era. Then, as the Rocky Mountains were forming in the west eight million years ago, the eastern peneplain shifted upward a thousand feet. As a result of the new, steeper topography, stream flow accelerated, carving deep valleys into the plain. Today, the visible remnants of the peneplain are the area's schist-bearing hilltops, all at about the same 1,000-foot elevation.

Mountain building, flowing water, and wind had roughly shaped the land; now the great glacial advances would shape the remaining peneplain into its current topography. Approximately two million years ago, accumulated snow and ice in glaciers to the far north began advancing under their own weight. A series of glaciations or “ice ages” followed, eroding mountains and displacing huge amounts of rock and sediment. The final advance, known as the Wisconsin Glacial Period, completely covered New England before it began to recede about 13,000 years ago. This last glacier scoured and polished the land into its final form, leaving layers of debris and landforms that are still distinguishable.

The glacier picked up, mixed, disintegrated, transported and deposited material in its retreat. Material deposited by the ice is known as *glacial till*. Material transported by water, separated by size and deposited in layers is called *stratified drift* (Natural Resource Inventory for Franklin County, University of Massachusetts Cooperative Extension; May 1976). The glacier left gravel and sand deposits in the lowlands and along stream terraces. Where deposits were left along hillsides, they formed kame terraces and eskers. Kames are short hills, ridges, or mounds of stratified drift, and eskers are long narrow ridges or mounds of sand, gravel, and boulders.

During the end of the last ice age, a great inland lake formed in the Connecticut River Valley. Fed by streams melting from the receding glacier, Lake Hitchcock covered an area approximately 150 miles long and twelve miles wide, stretching from St. Johnsbury, Vermont to Rocky Hill, Connecticut. Streams deposited sand and gravel in deltas as they entered the lake, while smaller silts and clays were carried into deeper waters.

SOILS

Soil is the layer of minerals and organic material that covers the rock of the earth’s crust. All soils have characteristics that make them more or less appropriate for different land uses. Scientists classify soils by these characteristics, including topography; physical properties including soil structure, particle size, stoniness and depth of bedrock; drainage or permeability to water, depth to the water table and susceptibility to flooding; behavior or engineering properties, and biological characteristics such as presence of organic matter and fertility (Natural Resource Inventory for Franklin County, University of

Massachusetts Cooperative Extension; May 1976). Soils are classified and grouped into associations that are commonly found together.

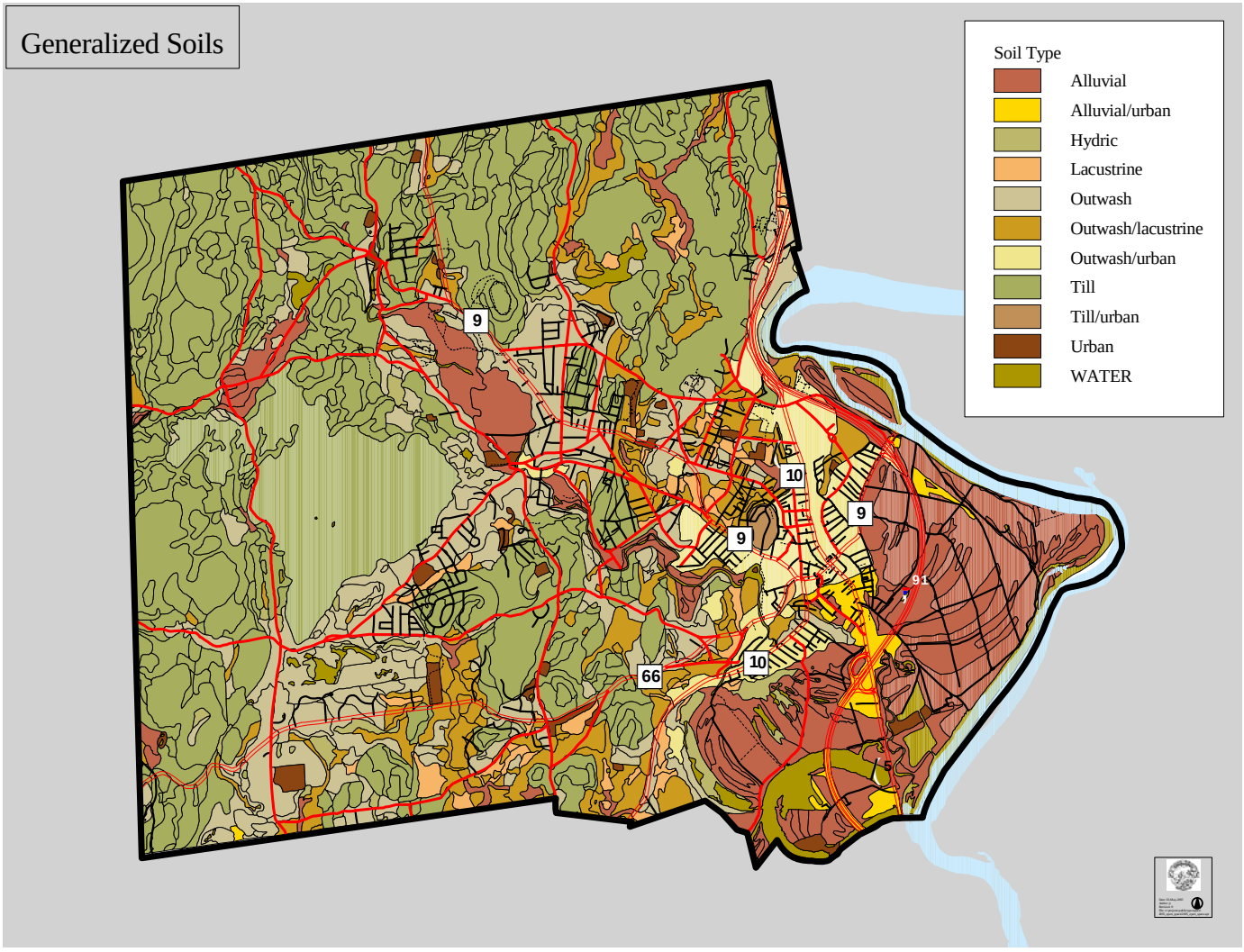
The United States Department of Agriculture Soil Conservation Service lists three generalized soil types for Northampton:

1. Hadley-Winooski-Limerick Association: Deep, nearly level, well-drained, moderately well drained, and poorly drained, loamy soils formed in alluvial material; on floodplains. Includes the "meadows," the floodplain of the Connecticut River.
2. Hinckley-Merrimac-Windsor Association: Deep nearly level to steep, excessively drained and somewhat excessively drained, sandy and loamy soils formed in outwash deposits; on outwash plains. Includes most of Downtown Northampton and Florence.
3. Charlton-Paxton-Woodbridge Association: Deep, level to steep, well and moderately well drained, loamy soils formed in glacial till; on uplands. Includes much of the residential area of town, and most of the areas that may be developed in the next 20 years.

Prime farmland soils have contributed to the City's economy throughout its history and Northampton's agricultural sector continues to contribute to the thriving economy of today. The soils that constitute Northampton's prime and unique agricultural land include the Hadley-Winooski-Limerick association and the Hinckley-Windsor- Merrimac soils. The Hadley-Winooski-Limerick association is found on the floodplains along the entire length of the Connecticut River and in the eastern portions of Northampton. The soils are generally silty and free of stones. The Hadley soils are well drained and are located on small knolls and terraces. The Winooski soils are moderately well drained and are located in the more level areas, whereas the Limerick soils are located in depressions and are poorly drained. Due to their high nutrient content, these soils are considered the most productive soils for farming in Northampton and the remainder of the Connecticut River Valley in Hampshire County. Due to the location of these soils, they are subject to flooding and are found in areas with a high water table for most of the year.

The Hinckley-Windsor-Merrimac association is found on the level to rolling terraces parallel to the Connecticut River and are located in the developed urban areas of Northampton. The Hinckley soils, which dominate this association, are droughty and have formed in deep sandy and gravelly deposits. Gravel can be found within a foot and a half of the surface and sometimes on the surface itself. The Windsor soils are droughty and located on deep sand deposits. The Merrimac soils are similar to the Hinckley soils; they are somewhat droughty, but the subsoil is sandy loam with the gravel layer found more deeply-approximately two feet from the surface. The Hinckley-Windsor-Merrimac soils are best suited for development, dairy farms and are also considered important recharge areas for groundwater.

The Charlton-Paxton-Woodbridge soils can be found in the western hills of Northampton. These soils are the most common upland soils found in Massachusetts and were developed on glacial till. The Charlton soils are found on the upper slopes and hilltops and are deep and well drained. Paxton soils are very deep to the bedrock and moderately deep to densic contact. Woodbridge soils were formed from dense glacial till and have large surface and subsurface stones and boulders that may interfere with excavation. These soils are located in the areas where new developments and residential expansion is occurring in Northampton-areas beyond the City's infrastructure limits.


Generalized Soils
Soil Type
Alluvial
Alluvial/urban
Hydric
Lacustrine
Outwash
Outwash/lacustrine
Outwash/urban
Till
Till/urban
Urban
WATER
9
10
9
9
66
10
5
5
91

LANDSCAPE CHARACTER

The diverse landscape character of the City of Northampton distinguishes it from surrounding communities. The City consists of densely developed urban areas, open farmland, forested hills, numerous streams, wetlands and an abundance of wildlife patches, corridors and matrices. The Connecticut River, a dominant landscape feature defines the eastern boundary of the City where much of the City's prime agricultural lands can be found within the Connecticut River floodplain (Northampton Meadows Area). Another outstanding feature in the City of Northampton is the steep forested uplands that define the western border and occupy approximately one-third of the Cities landscape.

WATER RESOURCES

WATERSHEDS

Northampton is rich in water resources, including brooks, streams, ponds, vernal pools, wetlands, and aquifers *(see the Water Resources Map).*

Most of the City of Northampton lies in the Connecticut River Watershed. The Connecticut River has a "Class B" water quality designation from the New Hampshire-Vermont border to Holyoke and is classified as a warm water fishery. Class B waters should provide suitable habitat for fish and other wildlife, and support primary contact recreational activities such as fishing and swimming. The water should also be suitable for irrigation and other agricultural uses. The classification of rivers and streams in Massachusetts does not necessarily mean that the river meets that classification; rather, classifications represent the State's goal for each river.

According to the "Connecticut River Basin 1998 Water Quality Assessment Report" published by the Massachusetts Department of Environmental Protection, the Connecticut River is impaired by polychlorinated biphenyls (PCBs) along its total length A report published in January 1998 by the New England Interstate Water Pollution Control Commission (NEIWPCC) listed bioaccumulation and toxicity as water quality issues for the entire length of the Connecticut River in Massachusetts. Bioaccumulation refers to the concentration of toxins in organisms at higher levels in the food chain. The report specifically identified PCBs in fish. As most recently as April, 2004, the Massachusetts Department of Public Health, Bureau of Environmental Health Assessment issued a public health advisory for certain species of fish contaminated by PCBs in the Connecticut River (Department of Public Health website; 2004). The general public is warned not to eat any affected fish species, which include channel and white catfish, American eel and yellow perch. Pregnant women and nursing mothers are advised not to eat any fish from the Connecticut River.

Although wastewater treatment facilities constructed throughout the watershed have been treating major pollution discharges for more than twenty years, the Connecticut River is still plagued by pollution from PCBs, chlorine heavy metals, erosion, landfill leachate, storm water runoff and acid rain. These pollutants come from both point sources, like wastewater treatment plants and manufacturing plants, and non-point sources, including failed residential septic systems, improperly managed manure pits and stormwater runoff carrying herbicides.

According to the Connecticut River Five-Year Action Plan 2002-2007 developed by the Massachusetts Executive Office of Environmental Affairs, the City of Northampton lies in the Central Reach of the Connecticut River Watershed in Massachusetts. Important characteristics of this part of the watershed include agricultural lands, large tracts of forestland, and the presence of the important wildlife habitat areas near the Mt. Tom/Mt Holyoke Mountain Range and the Rainbow Beach area in Northampton. The

Plan lists the following objectives for the Central Reach:

- Increase awareness of the importance of riparian buffers along the mainstem of the Connecticut River and its tributaries;
- Reduce human-influenced erosion along the mainstem and its tributaries;
- Restore vegetative riparian buffers where appropriate;
- Protect water quality through the implementation of growth management strategies;
- Obtain additional water quality and quantity data;
- Assist communities with the protection of drinking water resources;
- Improve fish passage;
- Encourage the protection of important wildlife habitat;
- Complete an updated inventory of existing boat access points;
- Implement an education program for boaters; and
- Control invasive plant species within the riparian buffers of the Central Reach

Although never as polluted as the section of the river below the Holyoke Dam, the water quality in the Connecticut River in Northampton has improved since 1972, when the federal Clean Water Act was passed. Improved sewage treatment plants, expansion of areas served by sanitary sewers, and ending of combined sanitary and storm water sewers (CSOs), have combined to improve water quality in the Connecticut River and Mill River. Northampton's Hockanum Road wastewater treatment plant was upgraded to secondary treatment in the early 1980s and currently services approximately eighty-five percent of houses in Northampton. There have also been some improvements in pollution from stormwater runoff. That source, though, remains the most significant threat to water quality.

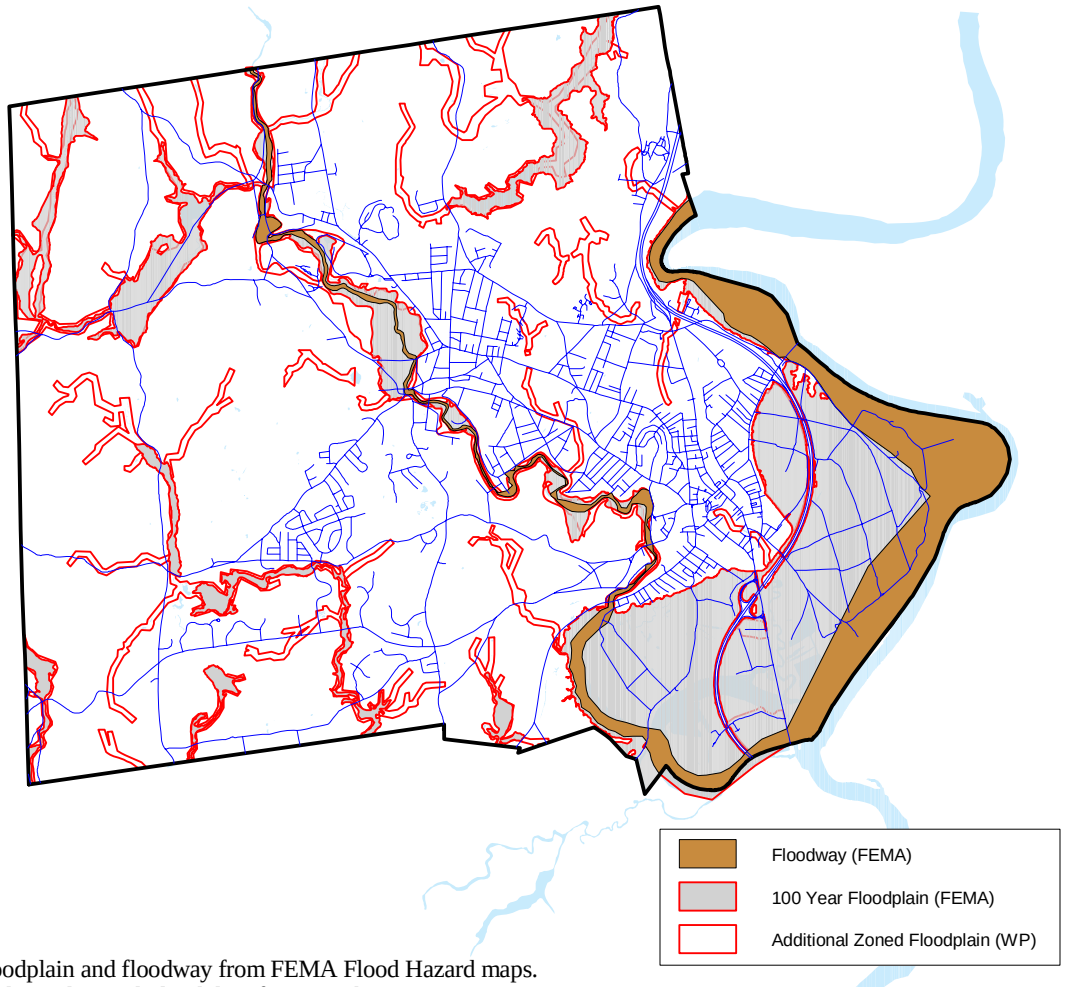
FLOOD HAZARD AREAS

Federal and local flood programs establish a 100-year floodplain, which is divided into two zones: a "floodway" and a "flood fringe." The "floodway" is defined as the channel of a river or other water course and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water elevation more than one foot. Floodways that are depicted on National Flood Insurance Program maps are more highly hazardous areas. They are areas where, if construction occurs, it places structures at significant risk in terms of depths and velocities of floodwaters. Northampton zoning prohibits structures in these areas.

The "flood fringe" is the area of the floodplain lying outside of the floodway, but subject to periodic inundation from flooding. Development may be permitted in such areas if it satisfies conditions and requirements regarding the height of the structure's first floor above the projected 100-year flood elevation, "flood proof" construction, displacement of flood waters, and related concerns. The State Building Code requires that all new living space be constructed at or above the projected 100-year flood level within the 100-year "flood fringe" area, and that there be equal space for water to come into and go out of a foundation.

Floodplain boundaries are delineated on FEMA's Flood Insurance Rate Maps (FIRMs). This delineation also includes a 500-year flood area. In Northampton, the 500-year floodplain does not generally extend significantly beyond the 100-year flood area. The 500-year floodplain is not subject to local regulation. Major floods, such as those caused by heavy rains from hurricanes, and localized spot flooding can exceed the 100- and 500-year flood levels. In addition, many small streams are not mapped for their flood hazard.

Flood Hazard Base Map
City of Northampton



Floodplain and floodway from FEMA Flood Hazard maps.
Additional Zoned Floodplain from Northampton Zoning Map.
Unshaded areas represent minimal flood hazards (Zone B and C).
Localized flooding does occur along other streams, brooks, and natural and man-made drainage ways.

Date: 02-Aug-2004
Author: jt
Revision: 0
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Northampton can experience flooding in any part of the City. One great misunderstanding is the belief that floods only happen in the floodplain. With sufficient rain, almost any area will experience at least pockets of surface flooding or overland flooding. Overland flooding in rural areas can result in erosion, washouts, road damage, loss of crops and septic system back-ups. Heavy rain in the more urbanized parts of the City with extensive paved and impervious surfaces can easily overwhelm stormwater facilities resulting in localized flooding and basement damage. Stormwater flooding also contributes to water pollution by carrying silt, oil, fertilizers, pesticides and waste into streams, rivers and lakes. The following table represents existing mitigation strategies for flood mitigation in the City of Northampton.

Type of	Description	Area Covered	Effectiveness	Options for

Mitigation			and/or Enforcement	Improvements or Changes
Federal, State and Local Regulations				
NPDES Phase II	Federal stormwater regulations	Any project within the City with 1 or more acres of land disturbed	In effect since 7/30/03	DPW in process of implementing Phase II Plan
Wetland Protection Act, Northampton Wetlands Ordinance, and Rivers Protection Act	State and local laws regulating development within the buffer zones of wetland resource areas and within the riverfront area	100 foot buffer around wetlands and the wetland resource area itself, and 200 foot resource area on both sides of every perennially flowing river and stream	Effective. Building permits cannot be issued without review by the Conservation Commission	Strengthen Wetland Ordinance; establish a no disturbance area adjacent to wetlands in less developed areas.
Stormwater Management Standards	State regulation under the Wetland Protection Act to regulate Stormwater and other point source discharges	New residential subdivisions; alterations to non-residential structures subject to site plan review; roadway projects	Effective. Enforced by the Conservation Commission and Planning Board	City in process of adopting stormwater management ordinance for DPW administration
Northampton Stormwater Management Ordinance	Local regulation to ensure that erosion and sedimentation is managed and post construction runoff rates and volumes are controlled	Any new development or construction that disturbs over 1 acre of land and will discharge directly or indirectly into the City's stormwater system	In effect since 6/17/2004. Administered and enforced by the DPW.	One of the main purposes of this new ordinance is to minimize damage to public and private property from flooding.
MA State Building Code	Requires flood-proofing of new construction within the 100-yr floodplain	All new or improved structures that require a building permit	Effective. Enforced by the Building Inspector.	Improve outreach to floodplain residents about State regs for property upgrades
Title V Regulations and Northampton Regulations	Minimum requirements for the subsurface disposal of sanitary sewage	Areas of the City not serviced by municipal sewers	Very Effective. Enforced by the Board of Health	Develop policy (Conservation Commission) on compensatory storage requirements for septic system repairs in the floodplain

Type of Mitigation	Description	Area Covered	Effectiveness	Options for

			and/or Enforcement	Improvements or Changes
Local Zoning				
Special Conservancy District, per the current Northampton Zoning Ordinance	Floodplain zoning which regulates development	Majority of the area contained within the floodplain of the Connecticut River (see Appendix A, p. 22)	Very Effective. Enforced by the Building Inspector and the Conservation Commission	Work with residents, land and business owners to develop a land use plan. Discussions should help determine rules for new development that will not damage the resource areas while encouraging investment in existing properties
Watershed Protection Overlay District, per the current Northampton Zoning Ordinance	Overlay District that regulates development.	Land adjoining streams and rivers (see Appendix A, p. 22)	Very Effective. Requires special permit from Planning Board. Enforced by the Building Inspector and Conservation Commission	
National Flood Insurance Program and Community Rating System	Federal Law regulating new and substantially improved construction in the floodplain	100-year floodplain (Zone A) as shown on the Flood Insurance Rate Map	Effective. Enforced by the Building Inspector; CRS participation can reduce insurance premiums up to 45%	Reduce insurance premiums 15% through the CRS by passing Flood Mitigation Plan
Open Space Preservation				
State and local land preservation within the floodplain	APR and CR lands, Arcadia Wildlife Sanctuary, Rainbow Beach (state and city), Shepard's Island, Elwell Island, Ct. River Greenways State Park, Mill River Greenway	1,251 acres within the floodplain	Very Effective, permanently preserves floodplain area	Pursue federal and state grants to buy repetitive loss properties, and APRs and CRs on properties posing environmental risks, and on land with valuable habitat, all on a willing buyer-willing seller basis*
State, local and non-profit land preservation outside the floodplain	Conservation areas, APR lands, parks, playgrounds, buffer areas	3,134 acres throughout the City	Incrementally effective, limits development in watershed areas	Make land acquisition a priority in the City budget

Type of Mitigation	Description	Area Covered	Effectiveness and/or Enforcement	Options for Improvements or Changes
Structural Projects				
Dikes	Man-made physical barriers to floodwaters	Surrounding downtown	Extremely Effective up to the 100-year flood level	On-going maintenance
Dam Maintenance	Necessary to prevent dam failure and flooding downstream	Area downstream of each dam	Fairly Effective. Records are kept by the Northampton DPW and OPD and by Mass. Dam Safety	Study the possibility of removing obsolete dams along the Mill River
Water Retention and Detention Ponds	Man-made ponds to collect or diffuse stormwater runoff	New development (commercial, industrial and residential when under subdivision control), City-wide	Effective. Part of site review process. Inspected by DPW (public and private structures).	Improve monitoring and enforcement; develop a design manual for "green" solutions to reducing run-off rates and volumes in new development
Maintenance and repair of City Stormwater Management Infrastructure	Storm drains and sewers	City-wide	Case-by-case as done, could be very effective in certain areas	Ongoing, develop a plan; identify and implement a funding stream, such as a dedicated fee for service

WETLANDS

Wetlands are transitional areas where land-based and water-based ecosystems overlap. Inland wetlands are commonly referred to as swamps, marshes and bogs. Technically, wetlands are places where the water table is at or near the surface or the land is covered by shallow water. Sometimes, the term wetland is used to refer to surface water as well.

Historically, wetlands have been viewed as unproductive wastelands, to be drained, filled and "improved" for more productive uses. Over the past several decades, scientists have recognized that wetlands perform a variety of extremely important ecological functions. They absorb runoff and prevent flooding. Wetland vegetation stabilizes stream banks, preventing erosion, and trap sediments that are transported by runoff. Wetland plants absorb nutrients, such as nitrogen and phosphorus, which would be harmful if they entered lakes, ponds, rivers and streams. They also absorb heavy metals and other pollution. Finally, wetlands are extremely productive, providing food and habitat for fish and wildlife. Many plants, invertebrates, amphibians, reptiles and fish depend on wetlands to survive. Wetlands have economic significance related to their ecological functions: it is far more cost-effective to maintain wetlands than build treatment facilities to manage stormwater and purify drinking water, and wetlands are essential to supporting lucrative outdoor recreation industries including hunting, fishing and bird-watching.

In recognition of the ecological and economic importance of wetlands, the Massachusetts

Wetlands Protection Act is designed to protect eight "interests" related to their function: public and private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, land containing shellfish, fisheries, and wildlife habitat. To this end, the law defines and protects "wetland resource areas," including banks of rivers, lakes, ponds and streams, wetlands bordering the banks, land under rivers, lakes and ponds, land subject to flooding, and "riverfront areas" within two hundred feet of any stream that runs all year. Local Conservation Commissions are responsible for administering the Wetlands Protection Act; Northampton also has its own local wetlands regulations. Many of Northampton's wetlands are mapped by the National Wetlands Inventory (NWI) (*see the Water Resources Map*).

VERNAL POOLS

Vernal pools are temporary bodies of fresh water that provide critical breeding habitat for many vertebrate and invertebrate wildlife species. They are defined as "basin depressions where water is confined and persists for at least two months during the spring and early summer of most years, and where reproducing populations of fish do not survive." Vernal pools may be very shallow, holding only 5 or 6 inches of water, or they may be quite deep. They range in size from fewer than 100 square feet to several acres (Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, *Massachusetts Aerial Photo Survey of Potential Vernal Pools,* Spring 2001). Vernal pools are found across the landscape, anywhere that small woodland depressions, swales or kettle holes collect spring runoff or intercept seasonal high groundwater, and along rivers in the floodplain. Many species of amphibians and vertebrates are completely dependent on vernal pools to reproduce. Loss of vernal pools can endanger entire populations of these species.

The state's Natural Heritage and Endangered Species Program (NHESP) has predicted the location of vernal pools statewide based on interpretation of aerial photographs. NHESP believes that its method correctly predicts the existence of vernal pools in 80 to 90 percent of cases. They acknowledge, however, that the method probably misses smaller pools. The NHESP has identified approximately sixty potential vernal pools throughout Northampton with several clusters especially in the northwestern part of town. According to NHESP, clusters indicate particularly good habitat for species. Also, with clusters, there are alternate habitats if something happens to one pool, and slightly different conditions in each may provide different habitats for species dependent upon the pools.

In addition to identifying potential vernal pools, NHESP certifies the existence of actual vernal pools when evidence is submitted to document their location and the presence of breeding amphibians that depend on vernal pools to survive. Certified vernal pools are protected by the Massachusetts Wetlands Protection Act and by additional state and federal regulations. In Northampton, there are seventy-two Certified Vernal Pools.

POTENTIAL AQUIFERS AND RECHARGE AREAS

Aquifers are composed of water-bearing soil and minerals, which may be either unconsolidated (soil-like) deposits or consolidated rocks. Consolidated rocks, also known as bedrock, consist of rock and mineral particles that have been welded together by heat and pressure or chemical reaction. Water flows through fractures, pores and other openings. Unconsolidated deposits consist of material from the disintegrated consolidated rocks. Water flows through openings between particles.

As water travels through the cracks and openings in rock and soil, it passes through a region called the "unsaturated zone," which is characterized by the presence of both air and water in the spaces between

soil particles. Water in this zone cannot be pumped. Below this layer, water fills all spaces in the "saturated zone". The water in this layer is referred to as "groundwater". The upper surface of the groundwater is called the "water table" (Masters, Gilbert. *Introduction to Environmental Engineering and Science, Second Edition*; 1998).

The route groundwater takes and the rate at which it moves through an aquifer is determined by the properties of the aquifer materials and the aquifer's width and depth. This information helps determine how best to extract the water for use, as well as determining how contaminants, which originate on the surface, will flow in the aquifer.

Aquifers are generally classified as either unconfined or confined (EPA and Purdue U.; 1998). The top of an unconfined aquifer is identified by the water table. Above the water table, in the unsaturated zone, interconnected pore spaces are open to the atmosphere. Precipitation recharges the groundwater by soaking into the ground and percolating down to the water table. Confined aquifers are sandwiched between two impermeable layers (Masters; 1998). Almost all the public wells in Massachusetts, including those in Northampton, and many private wells tap unconfined aquifers (Mass. Audubon Society; 1985). Wells that rely on confined aquifers are referred to as "artesian wells."

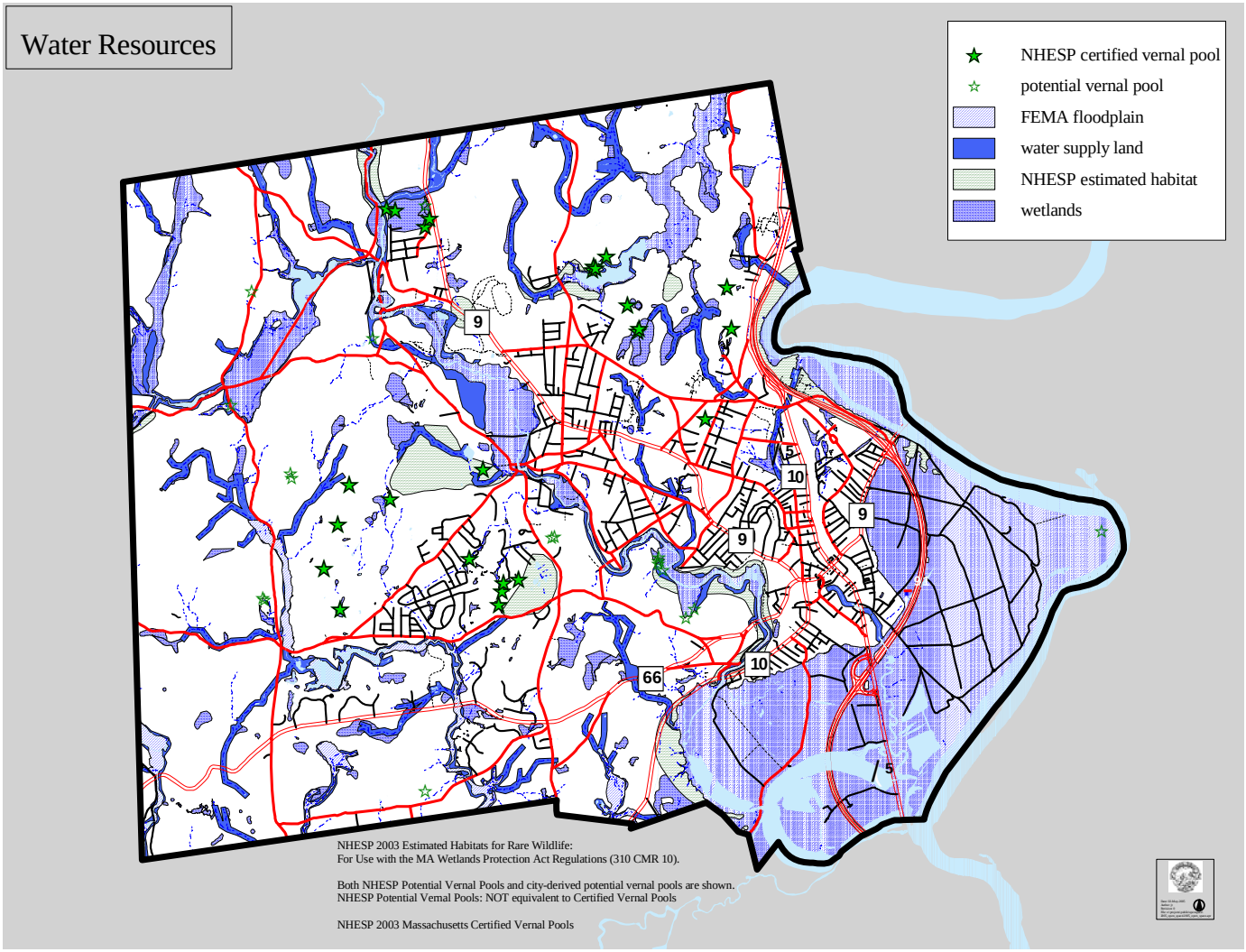
The Northampton Water District also has three delineated Zone II recharge area. A Zone II is that area of an aquifer that contributes to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at approved yield with no recharge from precipitation). The Zone II areas are located in the southwestern section of the City and the northeastern section of the City. Threats to the District's Zone II recharge area contributing to a designation of "high" threat of contamination include residential use, roadways, potential hazardous materials storage and use, presence of an oil contamination site as noted by DEP, and agricultural uses.

WATER RESOURCE TYPE

WATER BODIES (rivers, streams, ponds)	1,200 acres
FLOODPLAIN (100 year flood)	4,800 acres
WETLANDS (swamps, marshes)	~ 3,000 acres (2,000 acres mapped)
DRINKING WATER SUPPLY WATERSHEDS AND AQUIFERS IN NORTHAMPTON	5,000 acres (includes water and wetlands)

Note: Water supply land is not open for public recreation and some land may show up in more than one category in this table

Source-MassGIS Data



VEGETATION

Northampton has diverse natural habitats that support a variety of plants and animals. Approximately fifty percent of Northampton is covered by a mixed deciduous forest, including oak, maple, and beech, with smaller coniferous forests, including spruce, pine and hemlock. Several thousand more acres of land are in agriculture, abandoned fields, and wet meadows.

In 1993 the Conservation Commission hired a trained naturalist to do an ecological assessment of the Conservation Commission's properties, the lands abutting those properties, and several other sensitive sites in the city. This information, summarized in a report entitled, "*Rediscovering Northampton, The Natural History of City-Owned Conservation Areas*," was collected to provide greater data with which to make land management and land acquisition decisions. Major findings have been incorporated into this plan.

Unfortunately, Non-native invasive plants are threatening to these resources. These plants can take over part of the indigenous habitat and decrease the ecological value for native animals.

FORESTS

Plants are a critical component of ecosystems in Northampton. Plants convert solar energy into food, which supports all animal life. Plants cycle energy through the ecosystem by decaying, by removing carbon from the atmosphere and by shedding oxygen. Plants help moderate temperatures and act as shelter and feeding surfaces for herbivores, omnivores, and carnivores. Plants and animals together make up *natural communities*, defined as interacting groups of plants and animals that share a common environment and occur together in different places on the landscape (NHESP; 2001). Over the past decade, ecologists and conservationists in Massachusetts have devoted increasing effort to studying and protecting these natural communities, rather than focusing on individual species.

Forests are one of the City's most important renewable natural resources. The City's forests are diverse, including unusual communities such as major river floodplain forests. This section describes vegetated areas in town and their ecological and economic significance.

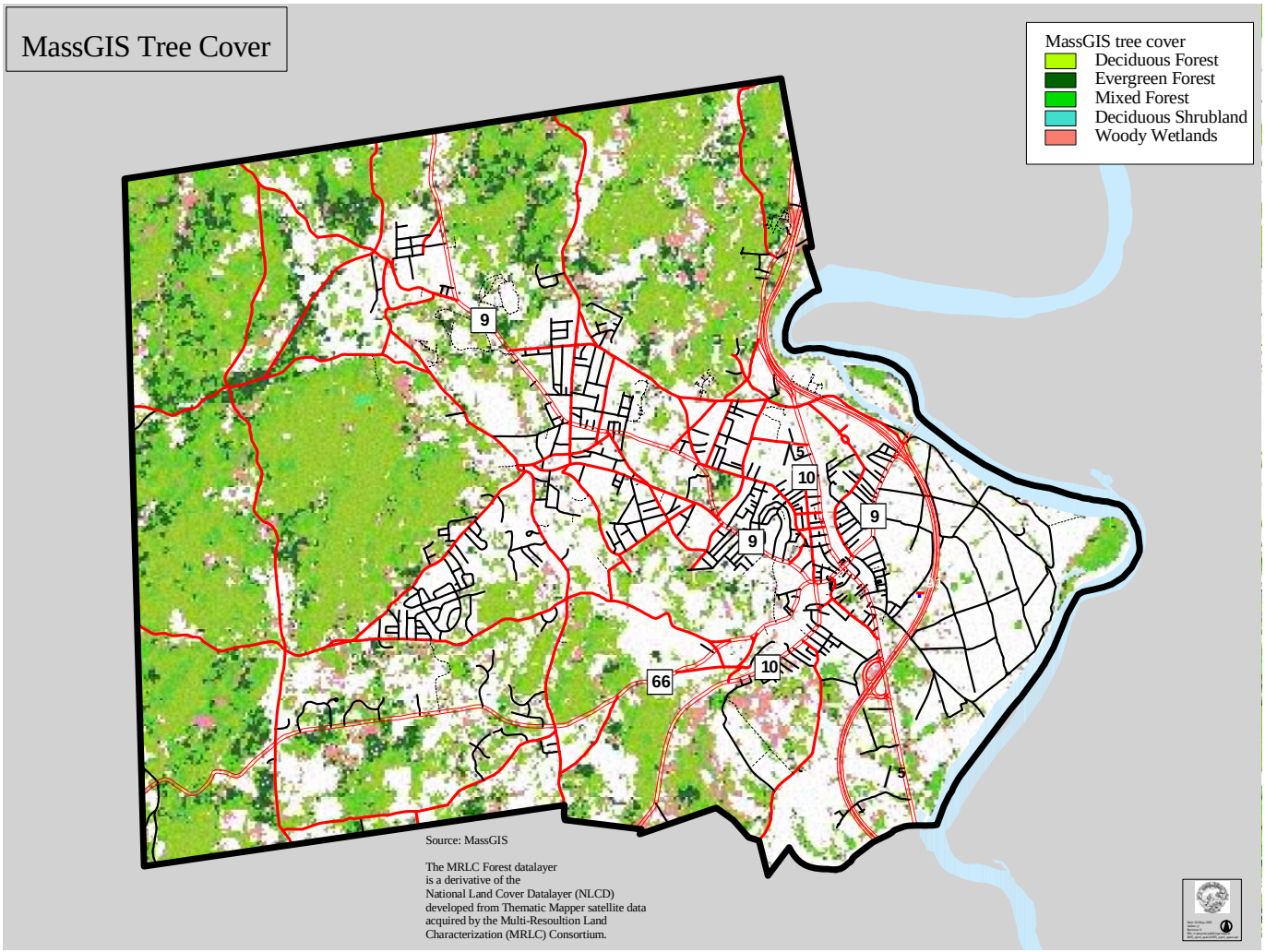
Major-River Floodplain Forest

Major-River Floodplain forests occur along large rivers such as the Connecticut River.
The soils found within this environment are predominantly sandy loams without a surface organic layer. Flooding occurs annually and is usually severe. The "island variant" occurs on elevated sections of riverine islands and riverbanks where there are high levels of disturbance from intense flooding and ice scour. The dominant species of this floodplain forest is the silver maple (*Acer saccharinum*), covering the majority of the overstory with lesser amounts of cottonwood (*Populus deltoides*). American elm (*Ulmus americana*) and/or slippery elm (*Ulmus rubra*) can be found in the subcanopy. Shrubs are lacking and the herbaceous layer primarily consists of stinging nettles (*Laportea canadensis*). Ostrich fern (*Matteuccia struthiopteris*) also occurs and whitegrass (*Leersia virginica*) is found in small amounts. The "island variant" has similar species, but cottonwood, sycamore (*Platanus occidentalis*) and American ash (*Fraxinus americana*) are also present in the canopy. Box elder (*Acer negundo*), staghorn sumac (*Rhus typhina*), bittersweet (*Celastrus orbiculata*), riverbank grape (*Vitis riparia*) and Virginia creeper *Parthenocissus quinquefolia*) are also present. Floodplain forests are insect-rich habitats that attract many species of songbirds. Raptors such as bald eagles and red-shouldered hawks also use riverbank trees as perch sites. Wood ducks and hooded mergansers are found along the shady edges of the riverbanks as are Eastern comma butterflies and several species of dragonflies. Floodplain forests also provide sheltered riverside corridors for deer and migratory songbirds. Many state protected rare animal species use the floodplain forest as an important component of their habitat.

RARE THREATENED AND ENDANGERED PLANT SPECIES

Vascular Plant Lygodium palmatum Climbing Fern SC
Vascular Plant Ophioglossum pusillum Adder's-tongue Fern T
Vascular Plant Panicum philadelphicum Philadelphia Panic-grass SC
Vascular Plant Eragrostis frankii Frank's Lovegrass SC
Vascular Plant Eleocharis diandra Wright's Spike-rush E
Vascular Plant Eleocharis intermedia Intermediate Spike-sedge T
Vascular Plant Carex typhina Cat-tail Sedge T
Vascular Plant Carex bushii Bush's Sedge E
Vascular Plant Arisaema dracontium Green Dragon T
Vascular Plant Salix exigua Sandbar Willow T

Vascular Plant Waldsteinia fragarioides Barren Strawberry SC



FISHERIES AND WILDLIFE

Deer, bear and other mammals thrive in the woodland and forest edge, especially in the northern and western sides of Northampton. Game birds, such as pheasants, native grouse, woodcock, and turkey are also present in large numbers, along with raccoons, muskrats, and fox. For several years there have been increases in the numbers of otter, opossum and beaver. Arcadia Wildlife Sanctuary, which conducts detailed biological assessments and bird counts, has counted upwards of 200 species of birds in or passing through the sanctuary, including the Bald Eagle, Redtail Hawk, and Screech Owl.

The various lakes, streams and rivers in Northampton provide environments for a variety of fish, such as trout, salmon, bass, pickerel, northern pike, shad and walleye. The Connecticut River, the Ox-Bow, and the Mill River in the Arcadia Wildlife Sanctuary are especially significant aquatic habitats.

Although Northampton has diverse plant and animal habitats, the habitat is not as productive as it once was. Like most areas in New England, wetlands were filled to allow development, prior to federal and state wetlands protection acts. Even with the passage of those acts, small amounts of wetlands, especially isolated wetlands, continue to be lost or degraded because of nearby development. As development extends up valley corridors and increasingly up hillsides, habitats are being fragmented. This fragmentation is degrading the range and productivity of the flora and fauna in those areas.

The City's Wildlife Committee (formed under the auspices of the Conservation Commission) is currently running transects and working to better define wildlife population and corridors. This data will inform this and future plans.

RARE THREATENED AND ENDANGERED WILDLIFE SPECIES

Amphibian Ambystoma jeffersonianum Jefferson Salamander SC
Amphibian Ambystoma opacum Marbled Salamander T
Amphibian Hemidactylium scutatum Four-toed Salamander SC
Amphibian Scaphiopus holbrookii Eastern Spadefoot T
Beetle Cicindela duodecimguttata Twelve-spotted Tiger Beetle SC
Bird Botaurus lentiginosus American Bittern E
Bird Ixobrychus exilis Least Bittern E
Bird Haliaeetus leucocephalus Bald Eagle E T
Bird Accipiter striatus Sharp-shinned Hawk SC
Bird Vermivora chrysoptera Golden-winged Warbler E
Bird Pooecetes gramineus Vesper Sparrow T
Bird Ammodramus savannarum Grasshopper Sparrow T
Bird Ammodramus henslowii Henslow's Sparrow E
Butterfly/Moth Satyrium favonius Oak Hairstreak SC
Dragonfly/Damselfly Gomphus ventricosus Skillet Clubtail SC
Dragonfly/Damselfly Gomphus abbreviatus Spine-crowned Clubtail E
Dragonfly/Damselfly Ophiogomphus aspersus Brook Snaketail SC
Dragonfly/Damselfly Aeshna mutata Spatterdock Darner SC
Dragonfly/Damselfly Boyeria grafiana Ocellated Darner SC
Dragonfly/Damselfly Neurocordulia yamaskanensis Stygian Shadowdragon SC
Dragonfly/Damselfly Stylurus amnicola Riverine Clubtail E
Dragonfly/Damselfly Stylurus scudderi Zebra Clubtail E
Dragonfly/Damselfly Stylurus spiniceps A Clubtail Dragonfly T
Fish Acipenser brevirostrum Shortnose Sturgeon E E
Fish Hybognathus regius Eastern Silvery Minnow SC
Fish Catostomus catostomus Longnose Sucker SC
Fish Lota lota Burbot SC
Mussel Alasmidonta heterodon Dwarf Wedgemussel E E
Mussel Alasmidonta undulata Triangle Floater SC
Mussel Lampsilis cariosa Yellow Lampmussel E
Mussel Ligumia nasuta Eastern Pondmussel SC
Mussel Strophitus undulatus Creeper SC
Reptile Glyptemys insculpta Wood Turtle SC
Reptile Terrapene carolina Eastern Box Turtle SC
Snail Ferrissia walkeri Walker's Limpet SC

SCENIC RESOURCES AND UNIQUE ENVIROMENTS

Expanding on the Department of Conservation and Recreation (DCR) Scenic Landscape Inventory, significant scenic resources and unique environments were mapped for Northampton. These resources include the notable "viewsheds," or vistas, from public roads, water bodies, and permanently protected open space. The assessment also shows historic districts. Known archaeological sites are **not** specifically identified in order to protect them. They are, however, primarily concentrated on the Connecticut River and, to a lesser extent, on the Mill River.

As development occurs, especially development with little sensitivity to the community's views, some scenic views are being lost. In addition, as farmland has been abandoned, closed forests are replacing formerly pastoral views.

ARCHEOLOGICAL RESOURCES

The Northampton State Hospital (NSH) and its burial ground are on the National Register of Historic Places. Independent listing of the hospital cemetery is currently being sought. The following description is from the *Preservation Guidelines for Municipally Owned Historic Burial Grounds and Cemeteries* produced by the Department of Environmental Management Historic Cemeteries Preservation Initiative in May 2000.

At its opening in 1858 as the second state hospital, it was called the Northampton Lunatic Asylum. The institution was co-founded by Dorothea Dix, who led the reform movement to found asylums for the more humane treatment of the insane. In a field survey of conditions in Massachusetts she found the insane were chained or caged in basements or attics and often beaten or otherwise mistreated. She successfully campaigned for state asylums where the insane would be treated with more humane methods (Brown 1998).

The Northampton State Hospital burial ground was in use from the founding of the institution in 1858 until 1921. Patients who died and were not claimed by family or friends for burial elsewhere were buried there. The institution mortuary slip books contain several direct references to the “hospital cemetery” (12/25/1914; 6/11/1916), “hospital burial ground” (7/23/1915) or “hillside cemetery” (6/11/1916) in the section for the disposition of the body. Research by Elizabeth Kroon for the Department of Mental Health (DMH) in June 1997 confirmed the presence of 181 burials on the hospital grounds by cross-referencing death records in hospital casebooks with extant mortuary slips, death registers of the City of Northampton, and local cemetery records. She further found 413 burials with unlisted or unclear dispositions such as “Northampton”, which also could have been buried on the grounds of the State Hospital. In the later 19th century, between a half and a third of patients who died in the hospital were buried on the grounds (McCarthy 1974: 70). After 1921 patients not claimed for burial by family or friends were listed as “Chapter 113 of general law” or “Chapter 77 of regular law,” which were new state laws permitting citizens who die in state hospitals, asylums or prisons to be sent as cadavers to medical schools. These laws are still in effect.

The location of the Northampton State Hospital burial ground was primarily identified through a strong oral tradition among grounds-keepers at the institution. The primary keeper of the oral history is Bob Mielke, who currently works in the DMH business office and was a groundskeeper at the hospital for many years. He first heard that the site was a cemetery from groundskeepers in the 1950s, when he and

friends played there as children. During his childhood, Mr. Mielke remembers, he and his friends found two rectangular stones that he believes were marker stones of some sort. He describes them as small squares with no legible inscriptions on them, but he is not sure. When Mr. Mielke was employed at NSH, he remembers that the plot was always referred to as a cemetery. He further remembers a room at the hospital with records of burials and the layout of the cemetery. These records have disappeared.

The cemetery's location is verified by the one documentary reference to the burial ground found to date in the institution's records. A November 1933 entry in the Superintendent's Reports 1932-1936 described land that need draining as "land at the foot of what used to be the hospital cemetery which borders on Mill River and runs up towards the spring in the back of the barn." (NSHHR 1993). This referenced piece of land is now called "the pumpkin patch," and is still known for its poor drainage. The location of the hospital cemetery specified in the hospital record is congruent with the oral history of its location.

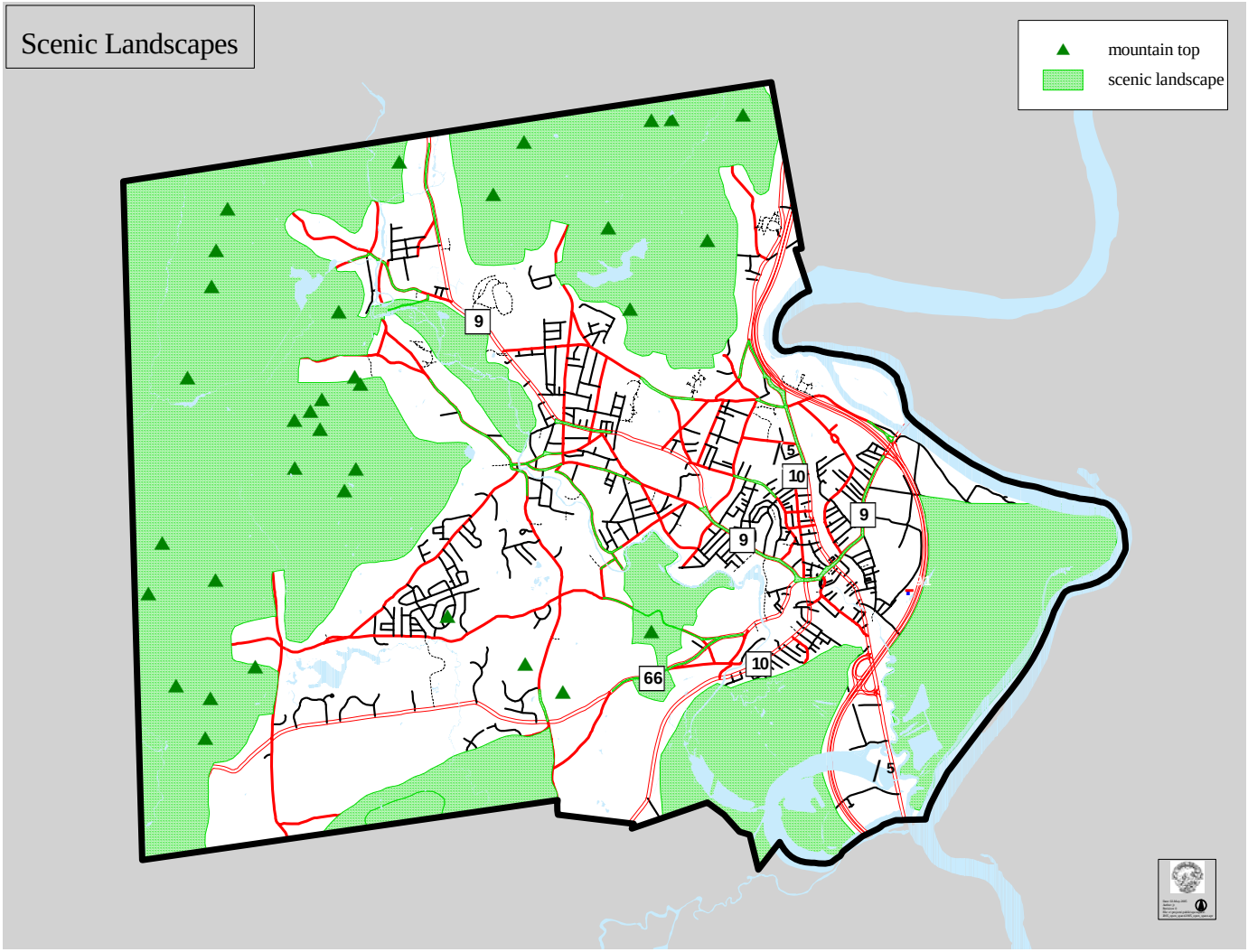
The burial ground is accessed by a series of dirt roads that start at Burts Pit Road and extend toward the Mill River. The burial ground is an open field surrounded by a dirt road except on the south side, where the field ends in a wood. In the field there are no gravestones, paths, entranceways or fences indicating the locations of graves or the boundaries of the cemetery. There is an unmarked gravestone in woods just across the dirt road to the north of the field. A cobblestone-covered north-south mound marks the grave with a small upright gravestone at the south end that is flat on the north side but is not engraved. Mr. Mielke stated that until recently an old woman had periodically visited and placed trinkets on the grave. A bit to the west there was another north-south cobblestone-covered mound that might also be a grave, although it lacked a gravestone.

Archaeological reconnaissance survey of the site confirmed the location of the burial ground that was previously identified through oral history. Squarish soil deflations were found extending in 2-3 fairly straight nearly north-south rows from the woods on the south edge of the field northerly along the top of the hill. Further, very distinctive squarish to rectangular patches of very green mound cover about 1 inch high were found where the taller straw-colored hay in the rest of the field did not grow. The long axis of the patches of low green vegetation extended roughly east to west, which is the traditional direction for Christian burials. Further, the patches were roughly formed rows running north south as is typical in Christian cemeteries.

There is little indication of underground disturbance in the pattern of deflations and patches of low green vegetation, except that some vegetation patches were no longer or shorter than a typical adult burial would be. Historic tilling of the field may have caused some disturbance of the vegetation patches. A 1916 map labels the burial ground parcel as "Tillage" (Davis 1916). In addition, Alan Scott recently heard from groundskeeper Bud Warnock that he planted corn in the field c. 1943. Mr. Warnock had heard that the field was a cemetery from his father and uncle who were groundskeepers in the 1920's. Since the 1950's the parcel has changed hands between various state departments and at one point in the 1950's was used for instruction in haying by the University of Massachusetts agricultural department. The current proprietor of the parcel is the Department of Agricultural Resources (DAR), from whom the City of Northampton holds a 99-year lease. Northampton leases the property to the Smith Vocational School, which uses it for instruction in haying (above ground), which is beneficial for maintenance of the field.

A small cluster of overgrown bushes was prominently visible near the dirt road at the top of the hillside burial ground. Within the cluster of bushes were two large stones that could be mistaken for large gravestones, but were shown to be the remnants of a bench. Mr. Mielke recounted a story he heard about

how the bench was built and the bushes planted as a result of research of the burial site by Bill Goggins, who became involved with the Northampton State Hospital Board of Directors in 1958. Using his political connections and influence, Mr. Goggins was able both to confirm a story that four veterans were buried in the hillside and to erect a monument at the top of the hill, including the bench and the bushes. Each Veteran's Day thereafter NSH employees planted a flag near the memorial, as noted in the 1967 NSH newsletter for the employees.



ENVIRONMENTAL CHALLENGES

Much of Northampton has sensitive ecological resources, especially the water resources such as wetlands,

streams, floodplain, and drinking water aquifers and watersheds. Much of the richest wildlife habitat in Northampton is at some risk, and some surface water and wetland resources are slowly being degraded. This occurs for the obvious reasons: Wildlife habitat is converted to urban and suburban land, and development cuts into ranges and habitat types.

This loss of habitat and natural flood buffering areas is Northampton's most serious environmental problem. Non-point source pollution (rain and snow runoff laden with pollutants) also poses significant water quality problems.

Over the past 40 years, tougher environmental rules and policies, including separation of combined sanitary and storm sewers, construction and expansion of the waste water treatment plant, pretreatment standards for sanitary waste, lined landfills, wetlands regulations, erosion control standards, and improved forest management practices, have all softened the impacts of development on natural and ecological resources. Air pollution continues to present a health hazard, especially during the summer months, to Northampton and the rest of the Pioneer Valley. During the summer, ozone pollution builds up and blows in from the south. The pollution levels far exceed federal ozone standards.

NON-POINT SOURCE POLLUTION

The pollution of Northampton's water and ground water resources is important to identify and manage for residents and wildlife that reside there. Non-point source pollution (NPS) is runoff that has been altered and contaminated by outside sources like salt and sand from roadways, failing septic systems, underground storage tanks, landfills, gas stations, agricultural runoff, fertilizer from lawns and other areas. These pollutants may enter into water bodies from where they originate or due to snowfall and rainfall thereby harming water quality. The challenge is to find a balance for these man-made pollutants and nature and to reduce the negative impact to a minimum or eliminate it completely. Part of that process is to have an appropriate monitoring and management in place to identify when levels are of concern and what measures should be taken to get them back to a healthy level.

Non-point source pollution is a contributor to the degraded water quality of the Mill River for example. Fortunately, there are ways to reduce the affects of NPS. Keeping storm drains that connect to our lakes, streams and rivers clear of debris, apply any lawn chemicals sparingly if at all, control soil erosion, minimize the amount of salt and sand added to roadways in winter months, encourage the development of construction/sediment ordinances in the City, have septic systems pumped and inspected every 3-5 years, conduct further outreach and education to local residents about NPS and purchase environmentally friendly household cleaner

HAZARDOUS WASTE SITES

Massachusetts General Law, Chapter 21E, the state Superfund law, was originally enacted in 1983 (and amended in 1992, 1995, and 1998), and created the waste site cleanup program. Contaminated properties regulated under this law are often called "21E sites". The regulations adopted to implement c. 21E are called the Massachusetts Contingency Plan (MCP).

Soon after the waste site cleanup program started, it became clear that DEP could not oversee cleanup of thousands of sites and do it at an expeditious pace. As a result, 1992 amendments to c. 21E privatized the program, meaning that those responsible for cleaning up contamination (potentially responsible parties or PRPs) hire licensed site professionals (LSPs) to oversee most cleanups (with limited DEP oversight) to ensure compliance with the MCP. This allows DEP to focus its resources on key stages of assessment and

cleanup at specific sites as conditions warrant.

Major program components include:

- requiring that DEP be notified about contamination that exceeds specific levels. DEP maintains a searchable database (http://www.mass.gov/dep/bwsc/sitelist.htm) to track the cleanup progress of reported sites. Once a site is reported to DEP, regulatory deadlines are triggered for submitting site information and conducting the cleanup so that, within 6 years, the site no longer poses an unacceptable health or environmental risk. The graphic on page 4 depicts the cleanup timeline.

- responding to emergencies when oil and/or hazardous material is no longer contained and presents a risk to people and the environment. These situations trigger immediate response actions. If the person responsible for the contamination cannot or will not clean it up, then DEP brings in its own cleanup contractors to carry out rapid responses at the PRP's expense.

- encouraging early risk reduction cleanup actions. For serious problems, such as sudden releases, imminent hazards, and other time-critical conditions, early actions are required to reduce risks. When the situation poses a lesser threat, limited cleanup actions may be performed voluntarily to reduce risks or lower the cost of future comprehensive cleanups. Sites may not have to tier classify (see the next bullet and the graphic) or be subject to cleanup deadlines if early actions performed before the one-year tier classification deadline are sufficient to meet cleanup standards.

- that are not cleaned up within one year of being reported. Sites are ranked by complexity, the number of sources, and how serious a potential threat the contamination poses: Tier I (serious, with Tier 1A the most serious) or Tier II (less serious.)

- allowing varying levels of cleanup based on land use. The MCP requires contamination to be cleaned up to a level that protects people and the environment based on how the site is being or will be used, such as for housing or commercial purposes. The regulations also allow land use controls, called activity and use limitations (AULs), to be used as cleanup strategy components.

- assessing fees for sites that have not completed and documented a cleanup within a year of being reported. All sites are assessed a fixed annual compliance fee while work continues. These fees are assessed each year the site is being addressed until DEP receives documentation that the site has been cleaned up consistent with MCP standards.

- facilitating redevelopment and reuse of contaminated sites. State and federal "Superfund" laws place the burden of cleanups on owners and anyone else who caused or contributed to the contamination. To encourage these sites to be reused, the Brownfields Act, which amended c. 21E in 1998, created protections for people who did not own or operate the site at the time of the release and did not cause or contribute to the contamination and who complete the cleanup. This relief ends liability for third party costs, property damage claims, and state reimbursement actions. People not qualifying for this protection may apply to the Attorney General for a negotiated "covenant not to sue" for cleanup costs.

The Brownfields Act also created exemptions and defenses for other entities such as tenants, banks, community development agencies, and downgradient property owners.

- ensuring compliance through use of several mechanisms created so the program works correctly without direct DEP involvement. PRPs/LSPs send reports to DEP that they develop while working to clean up sites. They must also submit a wide range of information about cleanup process activities. DEP conducts audits and has the authority to reopen cases not complying with the MCP.

- providing direct oversight during key stages of assessment and cleanup at specific sites, as conditions warrant, thereby limiting DEP staff involvement at most sites. Direct oversight is reserved for time-critical situations, sudden releases, and other serious conditions when a PRP cannot or will not perform required work. When a PRP cannot or will not perform required work, DEP may hire its own contractor to conduct the cleanup and bills the PRP for the costs.

- involving the public throughout the site cleanup process. People responsible for cleaning up sites must publish notices in local newspapers at major milestones (see graphic), informing the public about their activities and providing an opportunity for public involvement. People with a high level of interest in a site can petition to make it a "public involvement plan" site. Plans are developed by conducting interviews to identify public concerns and include opportunities for the public to comment on the cleanup process. The person conducting the cleanup is responsible for providing these public involvement opportunities.

Ranging from slight oil contamination to severe hazardous material contamination, the City of Northampton currently has 173 "21E" sites registered with the Department of Environmental Protection.

SOLID WASTE SITES

The City of Northampton regional landfill is a solid waste collection facility that was opened in 1969 and serves over forty communities with a design capacity of 2,800,000 tons. The landfill is fully lined with a leachate collection system and consists of a methane to electricity conversion system. The annual acceptance of waste is 50,000 tons and the current landfill area is 52 acres with a maximum depth of 90 feet. The landfill gas generation system has 13 extraction wells and one active flare. The landfill gas generation flow to flare is approximately 400 to 500 cubic feet per minute with 50% methane content. The E-Plus model estimation is 760 cubic feet per minute. Potential end users of the electricity produced from the methane gases are Smith College, Hampshire County Correctional Facility and the Tennessee Gas Pipeline Company. The landfill is currently proposing an expansion that will allow continued operation for approximately twenty more years.

The Northampton Landfill also has a recycling center that accepts:

- Materials currently collected as "mixed paper" include corrugated cardboard, boxboard, white and colored office paper, computer paper, copy paper, telephone books, paperback books and workbooks, newspapers and inserts, magazines and catalogs, manila file folders, manila envelopes, and mail (without plastic windows).
- Metals and white goods
- Tires
- Paint and paint related products
- Materials currently collected as "mixed containers" include glass, metal, plastic, and aseptic food and beverage containers. Rinsed milk and juice cartons from school lunch programs may be included in the future.
- Compostables: Materials potentially to be collected include leaf & yard waste, food waste, and non-recyclable paper products.
- Electronics and batteries

- Mercury bearing waste

SECTION 5
CONSERVATION AND RECREATION INVENTORY

Open space in the City of Northampton consists of farms, forests, park, and recreation areas under both public and private ownership and management. This section provides a summary of lands that provide open space, wildlife habitat, agricultural and forest products, watershed protection, scenic landscapes and recreational opportunities that have some level of protection from development.

In general terms, 'open space' is defined as undeveloped land. In an Open Space and Recreation Plan, the focus is land that is valued by residents because of what it provides: actively managed farm and forestland; wildlife habitat; protection and recharge of groundwater; public access to recreational lands and trail systems; important plant communities; structures and landscapes that represent the community's heritage; flood control; and scenic value. The term 'natural resource' describes the biological and physical components of an ecosystem that people depend on for their existence and for some, their livelihood. These components are air, surface and ground water, soil nutrients, vegetation, fisheries, and wildlife. Recreational facilities can include open space, parks, and developed areas like tennis courts and swimming pools. Open space and recreation plans typically identify areas of land that contain precious natural and recreational resources and prioritize them for protection.

Open space can be protected from development in several ways that differ in the level of legal protection they provide, the method by which they are protected, and by the type of landowner. When land is "protected," it is intended to remain undeveloped in perpetuity. This level of protection is ensured in one of two ways: ownership by a state conservation agency, a not-for-profit conservation land trust, or the City through the Conservation Commission, or attachment of a conservation restriction or similar legal mechanism to the deed.

A conservation restriction is a legally binding agreement between a landowner (grantor) and a holder (grantee) - usually a public agency or a private land trust; whereby the grantor agrees to limit the use of his/her property by forfeiting interests in the land (development being one type of interest) for the purpose of protecting certain conservation values. The conservation restriction may run for a period of years or in perpetuity and is recorded at the Registry of Deeds. Certain income, estate or real estate tax benefits may be available to the grantor of a conservation restriction.

There are several types of conservation restrictions. Some protect specific resources, such as wildlife habitat, or farmland. Actively farmed land with prime soils or soils of statewide importance may be eligible for enrollment in the state's Agricultural Preservation Restriction (APR) Program. The APR program purchases the development rights and attaches a restriction to the deed, which legally bars development, keeping land "permanently" available for agriculture.

The development of any parcel of land that is in the APR Program, protected with a conservation restriction, owned by a state conservation agency, or owned by a land trust or a city for conservation purposes, would require a vote by two thirds of the State Legislature as outlined in Article 97 of the Amendments to the Massachusetts State Constitution.

This "protection" conveyed by Article 97 does have its limits. The state legislature has voted to release this protection at the request of local communities, so that conservation land can be used for schools,

roads, economic development, or other public projects not related to resource protection.

Some land in Massachusetts owned by cities or water districts may be considered to have limited protection from development. If a city-owned parcel of land is under the legal authority of the City Council rather than the Conservation Commission, it is considered to have limited protection from development. The parcel could be called a wildlife sanctuary or a City forest, but not have the long-term protection afforded by lands owned and managed by the Conservation Commission. In this case, converting a City forest to a soccer field or a school parking lot could be decided by the City Council. A parcel of land used for the purposes of water supply protection is considered in much the same way. Unless there is a legal restriction attached to the deed or if the deed reads that the land was acquired expressly for water supply protection, the level of protection afforded these types of parcels varies depending on the policies of each community. In many cases, the City water district would be required to show the Massachusetts Department of Environmental Protection just cause for converting the use of the land. However, this is not an insurmountable hurdle.

Parcels enrolled in Massachusetts Chapter 61 tax abatement programs are “temporarily protected” from development. This program offers landowners reduced local property taxes in return for maintaining land in productive forestry, agricultural or recreational use for a period of time. These “chapter lands” provide many public benefits, from maintaining wildlife habitat and recreational open space to sustaining rural character, and local forest and farm-based economic activity. Another benefit of the Chapter 61 programs is that they offer cities the opportunity to protect land. When a parcel that has been enrolled in one of the chapter programs is proposed for conversion to a use that would make it ineligible for the program, the town is guaranteed a 120-day waiting period during which it can exercise its right of first refusal to purchase the property.

This section provides a detailed inventory open space and recreation land in the City of Northampton. Privately owned land provides many public benefits, but it is important to respect the property rights of landowners. While many landowners choose to keep their property in farms and forests, not all landowners allow public access.

NORTHAMPTON OPEN SPACE AREAS

Type of Open Space	Areas 2000	Acres 2000	Areas 2005	Acres 2005
CHAPTER 61	28	951.81	16	585.4
CHAPTER 61A	171	2085.9	129	1672.4
CHAPTER 61B	55	1680.11	44	1172.6
AGRICULTURAL PRESERVATION RESTRICTIONS	9	237.87	8	198.5
CONSERVATION AREAS	29	944.84	43	1528.2
CONSERVATION RESTRICTIONS	8	82.56	29	198.6
CITY PARKS	5	47.15	7	158.4
STATE PROTECTED BY DAR, DCR & DFW	14	363.6	14	373.3
MASSACHUSETTS AUDUBON SOCIETY	9	491.37	13	592.2
NORTHAMPTON WATER SUPPLY	N/A	N/A	11	515.8
RECREATION	N/A	N/A	14	67.7
SCHOOL	N/A	N/A	11	357.2

Source-Northampton GIS/MassGIS Data

NORTHAMPTON PERMANENTLY PROTECTED OPEN SPACE AREAS

Type of Open Space	Acres 2005
AGRICULTURAL PRESERVATION RESTRICTIONS	466.3
CONSERVATION AREAS	1528.2
CONSERVATION RESTRICTIONS	198.6
CITY PARKS	158.4
STATE PROTECTED BY DAR, DCR & DFW	373.3
MASSACHUSETTS AUDUBON SOCIETY	592.2
NORTHAMPTON WATER SUPPLY	515.8
RECREATION	67.7

Source-Northampton GIS/MassGIS Data

*267.8 acres from the Northampton State Hospital Agricultural Preservation Restriction is used in both the Agricultural Preservation Restrictions category and the State Protected by DAR, DCR & DFW category

City of Northampton Conservation and Recreation Areas

Type 1=Permanently Protected Conservation Land-Conservation Commission
Type 2=Permanently Protected Non-Profit Land-Open to the Public
Type 3=Permanently Protected Conservation or Agricultural Land-Private
Type 4=Permanently Protected Park and Recreation Land-City of Northampton Agencies
Type 5=Permanently Protected Conservation, Park or Agricultural Land-State Agencies
Type 6=City of Northampton Bike Paths, Rail Trails and Rights of Way
Type 7=Other Non-Permanently Protected Park, Recreation, Forest Land-City of Northampton
Type 8=City of Northampton Watershed Land
Type 9=Other Rights of Way
Type 10=Non-Permanently Protected Private Recreation and Conservation Facilities and Land
Type 11=School Sites
Type 12=Preservation and Historical Restrictions
Type 13=Affordable Housing Restrictions and Open Space/Housing Limited Developments
Type 14=Development Agreements

Condition
1=Excellent
2=Good
3=Fair
4=Poor

Recreation Potential-*context sensitive from the standpoint of the type of recreation available (active, passive)
1=Excellent
2=Good
3=Fair
4=Poor

Conservation and Recreation Areas

	Type	Acres	Condition	Recreation Potential
Aquifer Protection Area:Brookwood Marsh	1	20	2	3
Aquifer Protection Area:Indian Hill	1	7.065	2	3
Barrett Street Marsh	1	24.7	3	2
Mary Brown's Dingle	1	1.56	2	2
James H. Elwell Conservation Area	1	100	3	2
Fitzgerald Lake Conservation Area	1	625	1	1
Garfield Conservation Area	1		4	4
Historic Mill River Conservation Area	1	17.4	3	3
Ice Pond Conservation Area	1	22.2722	2	1

Manhan Rail Trail Buffer	1	0.79	3	1
Meadows/Kossakowski	1	3	1	4
Meadows/Montview Meadows	1	3.246	2	3
Meadows/Arcadia Joint Ownership	1	103	2	1
Mill River Greenway:Baystate Section	1	1.726	1	4
Mill River Greenway:Historic Mill River	1	1.039	3	1
Mill River Greenway:Leeds	1	0.1	1	3
Mill River Greenway:Vistron Section	1	0.5	3	4
Mill River Greenway:Yankee Hill Section	1	4.6	1	4
Mineral Hills Conservation Area	1	85	1	1
Parson's Brook Conservation Area	1	27.603	2	2
Rainbow Beach Conservation Area	1	55	1	4
Ridge Conservation Area	1	36.5	2	1
Roberts Hill Conservation Area	1	104	2	1
Roberts Hill Watershed Conservation Area	1	12.553	1	2
Saw Mill Hills Conservation Area	1	382	1	1
West Farms Conservation Area	1	15.86	1	2
Arcadia Wildlife Sanctuary	2	650+	1	1
Childs Park	2	30	1	1
Atwood Drive Conservation Restriction	3	8.019	1	4
Bear Hill Conservation Area CR	3		2	2
Burt's Pit Road Conservation Restriction	3	2.16	1	4
Dunphy Drive/White Oaks Easement	3	0.1	2	1
Historic Mill River Greenbelt CR and ROW	3	0.3	2	2
Fitzgerald Lake-Anciporch Forest Legacy	3	36	1	1
Fitzgerald Lake-Lathrop Community CR	3	14	1	3
Ice Pond Conservation Area CR	3	3.2	1	3
Park Hill Road APR Adams	3	72.25	1	4
Park Hill Road APR Gray/Peppard	3	30	1	4
Park Hill Road APR Kidder	3	47	1	4
Park Hill Road APR Micka	3	38/57*	1	4
Park Hill Road CR Gray/Peppard et.al	3	23.203	1	4
Park Hill Road CR Lathrop Community	3	11.215	1	4
Rocky Hill Cohousing CR	3	10.27	1	4
State Hospital Drumlin and Mill River	3	273.9	2	1
State Hospital Hospital Hill	3	20.1	2	1
State Hospital Mill River	3	8.1	2	1
Northampton Airport Seven Bravo Two CR	3	3.82	1	4
Agnes Fox Field Recreation Area	4	1.61	2	1
Arcanum Field Recreation Area	4	8.49	1	1
Childs City Park	4		1	1
State Hospital Community Gardens	4	8.086	1	1
Gothic Street Pocket Park	4	0.15	1	3

State Hospital Halligan-Daley Historic Park	4	0.5	1	3
Look Park	4	157	1	1
Main Street Streetscape Park	4	2328 Sq Ft	1	3
Maines Field Recreation Area	4	14.47	4	1
David B. Musante Jr. Beach	4	7.46	2	1
Nagle Downtown Walkway	4	2.5	4	1
Pulaski Park	4	1	3	1
Sheldon Field Recreation Area	4	12.848	3	1
Veterans Memorial Field Recreation Area	4	7.84	4	1
Elwell State Park	5	3.2	2	2
Norwottuck Rail Trail	5	6	1	1
Rainbow Beach	5	30.87	1	4
Shepard's Island	5	15	1	4
State Hospital Drumlin and Mill River	5	273.9	2	1
Manhan Rail Trail Downtown Link	6		4	1
Manhan Rail Trail Parking Area NSH	6	22,839 Sq Ft	4	1
Manhan Rail Trail Registry of Deeds Access	6		4	1
Northampton Bike Path	6	32.49	2	1
Manhan Rail Trail Spur Rocky Hill Cohousing	6	24,000 Sq Ft	4	1
Norwottuck-Northampton Bike Path King Street	6		4	1
Leeds Rail Trail Spur	6		4	1
Burt's Pit Road Recreation Area, Parcel C	7	15.49	2	1
Smith School VA Parcel Forestry Studies	7	182.1	1	1
Smtih Vocational Farm and Recreation Areas	7		1	1
Trinity Row	7	0.5	2	2
Leeds Memorial	7	1.6	1	1
South Main Street and Berkshire Terrace	7		2	3
Kolodzinski Park	7	0.25	2	3
V.F.W. Memorial	7		2	4
Edmund J. Lampron Memorial Park	7		2	3
Clark Street Well Aquifer Area	8	8.18	1	3
Roberts Reservoir	8	57+	1	3
Spring Street Well Aquifer Area	8	31.56	1	3
Reservoir Complex	8		1	3
Mill River Bloomberg	9		1	3
Mill River Futter	9		1	3
Clear Falls Recreation Area	10	73	1	1
Driving Range	10		1	1
Hampshire YMCA	10	4.3	1	1
Keyes Field	10		1	1
Northampton Country Club	10		1	1
Northampton Revolver Club	10	34.3	1	1
Oxbow Marina	10	56.1	1	1

Peoples Institute	10	1.5	1	1
Pine Grove Golf Course	10	132.3	1	1
Smtih College Mill River Paradise Pond Arboretum	10		1	1
Tri County Fairgrounds	10	42	1	1
Leeds School	11	9.3	1	1
Robert K. Finn Ryan Road School	11	18.2	1	1
Florence Community Center	11	2.5	1	1
JFK Middle School	11	15	2	1
Northampton High School	11	23	2	1
Jackson Street School	11	7.2	2	1
Bridge Street School	11		2	1
Northampton Community Music Center	11		1	1
Smith Vocational School and Agricultural Land	11	78.9	1	1
Former Vernon Street School	11		1	1
Hatfield Street School	12		1	1
The Manse	12		1	1
Masonic Street Fire Station	12		1	1
West Farms Chapel	12		1	1
Habitat for Humanity Ryan Road Limited Project	13		1	3
Habitat for Humanity Westhampton Road Limited	13		1	3
Habitat for Humanity Garfield Avenue Limited	13		1	3
Paradise Pond Apartments Easement	13		1	1
200-206 King Street	14		1	1
North King Street	14		1	1

PERMANENTLY PROTECTED CONSERVATION LAND – CONSERVATION COMMISSION

All Conservation Commission owned properties are permanently protected. Any disposal of Conservation Commission land, including easements and less than fee interests, requires Conservation Commission and City Council approval and, in accordance with Article 97 of the Constitution of the Commonwealth of Massachusetts, requires a two-thirds roll call vote of the state legislature. These parcels include:

AQUIFER PROTECTION AREA: BROOKWOOD MARSH - 20 Acres
Ownership: City/Conservation Commission
Zoning: URA
Location: Ellington Road, Crestview Drive, Sandy Hill Road, and Brookwood Drive
References: Map ID: 29-484, 29-414 & 29-418

Book 3536, Page 85 & 95 (for abatement of back taxes--1990)
Waterline Easement-Book 3994, Page 162 (1992)
Determination of Applicability and Fish & Wildlife permits (1992)
Gutowski donation: Map ID: 30C-48; Book 4521, Page 248; Book 4521, Page 259; Book 4531, Page 302; Book 4539, Page 153 (7/25/1994)

Partners: None

This parcel provides critical wetland habitat, filtration of pollutants, and protects the city's drinking water aquifer (Zone III). Beavers are very active in the area.
The Gutowski's donated some of the richest wetlands in the area in 1994. This site contains the original "Burts Pit." The land was formerly owned by the Northampton State Hospital and used for mining peat and other non-decayed organic material for the Northampton State Hospital's gardens.

AQUIFER PROTECTION AREA: INDIAN HILL - 7.065Acres

Ownership: City/Conservation Commission
Zoning: URA
Location: Indian Hill, Florence Road
References: Map ID: 29-550;
Book 3535, Page 234
Plan Book 141, Page 18
Acquisition: Donation (cluster) (1990)
Partners: None

This parcel contains an attractive stream and protects the city's drinking water aquifer Zone II and III.

BARRETT STREET MARSH - 24.7 Acres

Ownership: City/Conservation Commission
Zoning: URA-Flood Zone
Location: Barrett Street, bicycle path
References: Map ID: 24B-42
Book 1939, Page 321 (transfer from City 1976)
Book 2075, Page 28 (private donations 1978)
Book 3518, Page 204 & 206 (land swap 1990)
Book 4420, Page 243 (donation in settlement of law suit off Carlon Drive 2/9/1994)
Plan Book 165, Page 70
Plan Book 176, Page 133,
Right-of-Way Easement from Carlon Drive--Book 5309, Page 206 (2/10/1998)
Walkway permits (wetlands and building) (1990/1991)
Wetlands 246-114 (Stop and Shop's responsibility to clean up trash)
Partners: Formerly Barrett Brook Advisory Committee, currently none.
Signage: A “Barrett Street Marsh Conservation Area" sign was installed along Barrett Street.

This meadow and wetland serve as an important stormwater detention and filtration facility and provides critical wildlife habitat. It is surrounded by heavily developed residential and commercial properties. The area provides opportunities for nature viewing and urban wildlife habitat studies. A city drainage easement runs through the site. The area includes a right-of-way from Carlon Drive.

A 600-foot (375' Trap Rock Gravel/stone dust & 220' wooden boardwalk completed in 1992) wheelchair accessible walkway extends from the bikeway into the marsh (boardwalk built by Commission, Smith Vocational School, and volunteers, materials donated by Jackson Street Parent Teacher Organization and Community Development Block Grant).

MARY BROWN'S DINGLE - 1.56 Acres

Ownership: City/Conservation Commission
Zoning: URB
Location: Glendale Ave, between Franklin and Crescent Streets
References: Map ID: 24D-334
Book 2407, Page 270--Donation from Mary Brown (11/17/1983)
Partners: None

This area is comprised of small trees and shrubs, and serves as a natural open space and bird habitat in a residential neighborhood. A city storm sewer easement runs through the middle of this area. Over the years, fill from abutting properties has altered this area.

JAMES H. ELWELL CONSERVATION AREA - 100 Acres

Ownership: City/Conservation Commission
Zoning: SC
Location: Damon Road, Connecticut River
References: Map ID: 19-1 and 19-10
Book 2220, Page 339
Federal Land and Water Conservation Fund (#25-00308), Self-help, city (4/30/1981)
License to Farmer to farm the farmland--expired 12/2004
Signage: An "in cooperation with..." sign, with the Land and Water Conservation Fund logo built by DCR was installed by the Commission on Damon Road in 1992.
Partners: Memorandum of Agreement with DCR for Joint Management

This area is comprised of the 60-acre Elwell Island and 40 acres of adjacent riverfront land. The island provides habitat for endangered floodplain plants and animals. The eastern edge of the island provides an excellent beach and is very heavily used (including unauthorized camping) by motor boaters. A local farmer, in accordance with a Farm Use License, utilizes approximately 15.5 acres of prime farmland on the mainland. In 2004 and 2005 the farmland was lying fallow to allow the conversion of traditional farming to organic farming in 2006. This property is managed in cooperation with the Department of Conservation and Recreation in accordance with a joint management agreement and in conjunction with the adjacent Greenways State Park. The Environmental Police provide limited assistance in patrolling the area.

Elwell Island has been growing from river sedimentation (accretion) at a faster rate than it has been eroding for over a century. It is likely that the island is now larger than its official 60 acres. New layers of silt are added each year, creating an extremely lush interior, but one in which trees have a difficult time colonizing in.

HISTORY OF ELWELL ISLAND

1794 Map	Elwell Island did not exist
Early 1800s (7/24/1980 Daily Hampshire Gazette)	Allegedly, Levi Elwell, who owned the nearby shoreline, plants rocks and willow shoots on the sandbar, which begins island formation.
1831 Map	Elwell Island exists on map of Northampton
1904 (Daily Hampshire Gazette 7/24/1980)	Elwell Island has 25 acres, farmed by James Elwell, Levi Elwell's grandson.
1982 (Robert Pirani)	Using historic maps, the island grew from 9.7' to 18.2' per year from 1884 to 1939 (4 transects) and 12.3' per year from 1939 to 1977 (1 transect).

FITZGERALD LAKE CONSERVATION AREA - ~650 Acres:
Ownership: City/Conservation Commission (conservation restrictions are privately owned)
Zoning: RR & SR with WSP & WP overlays
Location: North Farms Road, Marian Street and Boggy Meadow Road
References:

- Abuza Section- 94 Acres, portion of map ID 7-35 (includes Swayze purchase):
  - Abuza: Book 4138, Page 271 (1/28/1993) Bargain sale by Richard Abuza ($33,200 owner donation), Land and Water Conservation Fund (#25-00427 $37,500) & city ($5,000)
  - Swayze purchase: Book 5360, Page 15 (4/30/98) Broad Brook Coalition ($2,000), Wharton Trust ($6,000) & city (closing costs), approved City Council 2/5/1998; First American Title Insurance Company 20301162 on file with City Clerk.
  - New England Telephone release Book 4570, Pages 294, 298, 300 & 302. (Donation 10/13/1994)
- Broad Brook Section- 42.75 Acres (includes Hughes, Kabat, Stoddard, Morin, and Hughes CR)
  - Hughes: Book 4822, Page 184 and Plan Book 179, Page 98 (2/9/1996); donation from Nancy Hughes required by cluster special permit; Lawers Title Insurance Corp. title insurance policy 136-00- 110653 on file with City Clerk.
  - Hughes CR: Book 4880, Page 192 & 203 and Plan Book 179, Page 235 (5/9/96); donation required by cluster special permit
  - Kabat: Book 6090, Page 202 (12/19/00) Land donation from Helen Kabat
  - Morin purchase-5.75 Acres: Book 8013, Page 326 (10/5/2004)--BBC ($3,560) City ($1,040)
  - Stoddard: Book 6908, Page 173 (11/27/2002 Taking); Book 7097, Page 156 (3/17/2003 Confirmatory Deed) Land donation from Anita Stoddard Packar, Laurence Stoddard, George Barrett, Ruth B. Drury, Peter Hehey, Jason Charlton, and Monica Doyle Lynch; BBC ($500)
- Burke Section- 4.72 Acres, Map ID 12C-93: Book 3344, Page 284; Land donation from Dorothy Burke (1984 & 3/13/1989)
- John A. Cimek Section- 38 Acre, portion of map ID 7-35: Book 4223, Page 145 (6/10/1993) city ($25,000), Broad Brook Coalition ($5,250) with Land and Water Conservation Fund covenants
- Cooke's Pasture- 179.1 Acres, portion of map ID 7-35 (includes pasture, Finn purchase and Paasch Flag Lot):
  - Cooke's Pasture: Book 4595, Page 134 (11/30/1994); City ($39,540), Self-Help ($112,200), Broad Brook Coalition ($31,000, includes Wharton Trust $5,000) & Sweet Water Trust ($10,000) (11/30/1994); Commonwealth Land Title insurance policy on file

with City Clerk.
    - Finn: Book 6100, Page 313 ("Friendly" Taking), Page 320 (Confirmatory Deed) (1/15/2001)--City ($2,000), Broad Brook Coalition ($10,000)
    - Paasch Flag Lot, Land Court, Book 18, Page 107 (Donation required by flag lot permit); permit recorded 1/22/01. Temporary right-of-way to Coles Meadow Road also provided.
- Fitzgerald Lake-172.5 Acres, portion of map 7-35 (includes Warburton and Vaughn purchase):
    - Fitzgerald Lake: Book 1951, Page 261--Self-Help ($72,825) & city ($72,826) (5/20/1977), Land and Water Conservation Fund covenants added in 1993.
    - ROW to dam: Book 1993, Page 11 (may no longer be valid ROW)
    - Warburton Purchase (5.5 acres: Book 4796, Page 38 (12/20/1995). CR to BBC Book 4826, Page 170 (2/20/1996); Commonwealth Land Title insurance policy 165-686836 on file with City Clerk
    - Vaughn (17 acres) "Friendly" Taking, Book 6250, Page 72 (6/19/01), BBC ($15,000)
- Marian Street Section- 11.85 Acres, portion of map 7-35: Book 2521, Page 1; Self-help, with 34% match donations from neighbors (12/18/1984)
- Pines Edge Section- 15.89 Acres: Map ID 18-42; Book 3557, Page 148, Plan Book 166, Page 52; disclosure 1/1991.(Land donation required by Pines Edge comprehensive permit); Mortgage Release Land Court Book 17, Page 208; Land Court Book 18, Page 107
- Lathrop Conservation Restriction- 14 Acres (see separate entry under conservation restrictions)
- Anciporch USFS Forest Legacy conservation restriction
- Sabra ROW and Conservation Restriction- 3 Acres: Pedestrian Easement Book 7253, Page 94 (6/10/2003) and Conservation Restriction Book 7407, Page 172 and related mortgage subordination Book 7407, Page 201 (8/22/2003); all as condition of special permit/subdivision approval.
- Michalski/Stewart section-33.5 Acres, Decision Book 8181, Page 292; portion Book 205, Page 11; Eminent Domain Order of Taking Book 8265, Page 80 (05/18/2005); Confirmatory deed Book 8265, Page 91 (05/18/2005); purchase price $17,000-$15,000 from Broad Brook Coalition and entire amount went to pay off back taxes.
- Bereska Taking –8.1 Acres (11/2/2006 Book 8953, Page 349), Bereska Confirmatory Deed (12/04/2006 Book 8967, Page 324), Map 2, Parcel 12.
- Owner Unknown/Porter section, 8.8 Acres Book 8854, Page 77 (8/28/06) eminent domain of tax title parcel, 8.8 acres.
- Private William Adams Memorial section-17 Acres, formerly Map ID 2-18, : Book 8688, Page 315 (taking) and Book 8688, Page 320 (confirmatory deed)

Permits: Order of Conditions 246-224 (trails & dam-expired 4/1995); Certificate of Compliance 246-149 (road); Order of Conditions 246-322 (accessible trail & parking lot); Order of Conditions 246-325 (herbicide on dam); Order of Conditions--Cookes Pasture (expired 6/1997); DigSafe: July 6, 1993 #93274641 (no buried cables by dam or old telephone line)

Trails: Lake Trail, Hillside Trail, Old Telephone Line Trail, Boggy Meadow Road, Cookes Pasture Trail, Marian Street Trail, Halfway Brook Trail

Improvements: Parking lot and paved trail from parking lot to Broad Brook completed in 1996 for $19,977 ($3500 from Massachusetts Lakes and Ponds Grant, $16,477 from CDBG Handicap Access

Dam Dam and access road to dam reconstructed in 1999 for $305,967 ($199,288 State Self Help Funds and $136,000 City funds)

This is the largest city-owned conservation area in Northampton. At is core is the 40-acre Fitzgerald Lake, created by an earthen dam. The lake is surrounded by pine-hemlock-hardwood forest uplands, wooded wetlands and meadows. It's wet and rocky setting offers excellent hiking trails, nature study, fishing, canoeing and skating, and is presently used for these activities.

The Fitzgerald Lake, Cookes Pasture and the surrounding areas are one of the most diverse and richest ecological resources in Northampton. Fitzgerald Lake and Cookes Pasture contain rare plant and animal species.

Broad Brook flows through the Burke Section, the center of Fitzgerald Lake (created by damming the brook), Cookes Pasture (where it is becomes a large beaver meadow) and the edge of the Abuza and the Cimek sections. Hunting is allowed only in the Abuza section, in the area north of the Hillside Trail and west of the Beaver Trail, and then not within 200 feet of a trail. Trapping is not allowed.

A wheelchair accessible path from the parking lot to Fitzgerald Lake (120 feet of asphalt path, 360 feet of boardwalk, 60 feet of gravel, and a boardwalk dock/platform) was installed in 1993.

Fitzgerald Lake dam, which is classified as a low hazard dam, is inspected periodically by the Dam Safety office of DCR, who then makes recommendations as to needed improvements (see action plan section of this plan). The City did a massive reconstruction of the dam in 1998.

The old telephone right-of-way on the property, which (long since discontinued and formally quitclaimed in 1994) has been blazed as a trail where it crosses the Abuza and John A. Cimek Sections of Fitzgerald Lake Conservation Area (FLCA).

Public Info: A Fitzgerald Lake Conservation Area brochure describes the area. A Fitzgerald Lake Conservation sign and other information have been installed at North Farms Road and Cook Avenue. Self-guided nature trail brochures are available at the trail off of North Farms Road. Also, there is a small box for maps at the Marian Street entrance.

Wildlife: Otter and extensive numbers of turtles have been seen in the lake. There is a large amount of beaver activity in the northern and eastern sections of the conservation area. Great blue herons and winter wrens rely on the site for critical habitat, and several rare species have been identified in the wetlands bordering the lake and in Cookes Pasture. The Elderberry Longhorn, or Elder Borer (Desmocerus palliates), a large, showy, black and yellow beetle, and a Wood Turtle (Clemmys insculpta) are two of the state-listed species that have been identified at the FLCA. Several vernal pools exist in the conservation area.

Partners: Memorandum of Agreement with Broad Brook Coalition for joint management, last amended 04/01/2001. The Broad Brook Coalition conducts routine maintenance of the conservation area, including trash pickup, boardwalk maintenance, trail maintenance, and dam brush clearance.

GARFIELD CONSERVATION AREA
Ownership: City/Conservation Commission
Zoning: URB
Location: Garfield Avenue
References: Map ID
Book 8557, Page 106 (12/15/2005): Montgomery friendly taking
Book 8632, Page 77 (3/1/2006): Montgomery confirmatory deed
Book _____, Page _____; Land from City
Acquisition: Purchase as settlement for former landfill on the site. Additional land bargain sold by Montgomery

This is a small conservation area in Florence. The City originally purchased the parcel as a settlement of litigation around a former landfill/dump on the site. The dump was privately owned in an old quarry, but in the early twentieth century, the City allowed dumping on the site. With all responsible parties gone, the City became responsible for the site. The Board of Health maintains responsibility for the landfill and holds an easement on the Conservation Commission Property to maintain the cap in perpetuity.

HISTORIC MILL RIVER CONSERVATION AREA (future Conte Fish and Wildlife National Refuge) 17.4 acres
Ownership: City/Conservation Commission
Zoning: SC
Location: Hockanum Road
References: Map 39-31, 39-40 and 39A-46.
Book 8961, Page 348 (11/28/06)
Acquisition: donation from Joseph McNerney, Assignee. Acquired with right to transfer on to the USA for management by the US Fish and Wildlife Service as part of the Conte Fish and Wildlife Refuge.

Limited Environmental Site Investigation performed by O'Reilly, Talbot & Okun, dated November 16, 2006.

ICE POND CONSERVATION AREA – 22.2722 Acres
Ownership: City/Conservation Commission
Zoning: SR and FFR
Location: Ice Pond Drive and Route 66
References: Map ID
Book 7534, Page 333 (9/298/2003)—deed
Book 7535, Page 1 (10/9/2003)—mortgage release
Acquisition: Donation, as a permit condition for a cluster subdivision.

This property abuts:
The State Hospital agricultural lands (protected by a city-held APR); and
The Ice Pond Conservation Area Conservation Restriction; and
The Pathways Co-Housing bike path (city-held right-of-way).

MANHAN RAIL TRAIL BUFFER - 0.79 Acres
Ownership: City/Conservation Commission

Zoning: HB
Location: Easthampton Road (Route 10)
References: Map ID 44-39
Book 5842, Page 281 ($1,000 Eminent domain by City Council approval 11/18/1999)
Partners: None

This land was purchased to possibly provide a small parking lot and access to the planned Manhan Rail Trail. The parcel contains remnants of the 18th century New Haven and Northampton Canal.

MEADOWS/KOSSAKOWSKI – 3 Acres with Right of Way
Ownership: City/Conservation Commission
Zoning: URA/WP
Location: Crosspath Road
References: Survey Plan Book 188, Page 1
Deed Book 6120, Page 19 (2/5/01)
First American Title Insurance Policy 100367887 (on file with City Clerk)

MEADOWS/ MONTVIEW MEADOWS – 3.246Acres
Ownership: City/ Conservation Commission
Zoning: URB
Location: Montview Avenue
References: Book 5905, Page 298 (3/24/00), Plan Book 186, Page 131
Acquisition: Donation (3/24/2000)
Misc: First American Title Insurance policy 20329816 (on file with City Clerk)
Partners: Informal neighborhood group.

MEADOWS-ARCADIA WILDLIFE SANCTUARY JOINT OWNERSHIP – 103 Acres
Ownership: City/Conservation Commission
CR granted to Mass. Audubon Society on property
Zoning: SC
Location: Old Springfield Road
References: Map ID
Book 5115, Page 113 – Sparko—38 acres (City Council approval 4/3/1997)
CR Book 5115, Page 127 – Sparko
Ticor Title Insurance 22-2620-106-00000151 (on file with City Clerk) – Sparko.
Sparko funding-- Self Help ($84,480), Mass. Audubon Society ($43,520)

Taking, Book 6167, Page 282 – Burt—65 acres
Confirmatory Deed, Book 6192, Page 112 – Burt
CR Book 6192, page 112 - Burt

These 103 acres were purchased by the City to preserve grassland bird habitat. Massachusetts Audubon Society at Arcadia holds a Conservation Restriction and is responsible for day-to-day management of the property. Arcadia census data for the grassland nesting species shows an increase in numbers of Bobolinks and Savannah sparrows since the property was purchased. Peter Vickery, the Massachusetts Audubon ornithologist who manages its grassland bird project, reports that the Sparko piece provides good Meadowlark habitat. Mass. Audubon will be watching over the next several years to see if this or the other grassland species are able to establish themselves.

Arcadia is also conducting butterfly surveys. Butterflies appear to be less plentiful on these hayfields than expected. Arcadia is allowing their field on the north side and abutting the Sparko parcel to grow milkweed encourage butterflies.

While flood plain forests are rare, Arcadia will manage the hayfields (and eventually other Massachusetts Audubon fields in Northampton now under cultivation) for grassland species. While other areas of the sanctuary have been allowed to grow up in to brush, these fields are very wet and are better not cultivated and some "weedy" areas provide food and shelter for migrating species particularly in the fall. Arcadia's ecological management goal is to encourage for native diversity.

While Mass. Audubon generally inventories land it acquires or manages, the hayfield is primarily non-native agricultural plants that have been cultivated for hay production. For that reason we do not anticipate conducting a botanical inventory on this site at this time.

The "fields" may not appear the way a skilled farmer would be accustomed to seeing them or the way our aesthetic sense might expect to see them. The land in the meadows, owned and/or managed by Audubon is increasingly being used by wildlife. Hay cutting is delayed until the birds complete their nesting cycle. The hay is not prime sweet crop. Some bird species require thinner grasses for nesting sites. Arcadia staff will not feed the land to produce a more abundant crop of hay. Bare spots are just fine. Plants going to seed may be great for migrating species.

Arcadia will be conducting educational programs and producing written materials to help people understand management practices for wildlife on land which was formerly devoted exclusively to agriculture. Arcadia's regular bird walks will be visiting the meadows during nesting season in future years. And of course one of the best birding (and other wildlife observation opportunities) for those who have mobility problems is available from Old Springfield Road.

The City of Northampton reserves the right to treat this area for mosquitoes.

Partners: Arcadia Wildlife Sanctuary

MILL RIVER GREENWAY: BAY STATE SECTION – 1.726 Acres

Ownership: City/Conservation Commission
Zoning: URB
Location: Riverside Drive, Bay State
References: Deed--Book 5879, Page 156 (2/4/2000), Plan Book 185, Page 231
Sewer easement on property—Book 2163, Page 236
Acquisition: Donation from Cutlery Building Associates
Partners: Informal with Baystate Village Association

Very thin but attractive parcel along the Mill River with trail along the river. Parcel extends north from the north side of the Mill raceway to Maines Field. It does not contain any portion of the old raceway (where some debris was dumped by the former cutlery and possibly other entities).

MILL RIVER GREENWAY: HISTORIC MILL RIVER – 1.439 Acres

Ownership: City/Conservation Commission
Zoning: URC

Location: Adjacent to Veterans' Field, off West Street
References: Map ID: NEW MAP ID
Book 7729, Page 130 (3/16/2004), MLC Book 7729, Page 134 (donation from Steven Berlin-Chavez and Reginal Chavez-Berlin)
Owner Unknown/historic Mill River, Book 8854, Page 82 (8/28/2006) eminent domain of tax title parcel, 0.4 acres.

This small parcel would help allow an eventual restoration of the Historic Mill River in downtown and allow a trail access from pleasant Street to Veterans' Field.

MILL RIVER GREENWAY: LEEDS – 0.1 Acres
Ownership: City/Conservation Commission
Zoning: URB, WP
Location: Off Mill River; by the monument to flood victims.
References: Plan Book 186, Page 230, Book 6158, Page 41, (3/29/01), Mortgage Release Book 6158, Page 40
Acquisition: Myette Donation
Partners: Informal—Leeds Civic Association

MILL RIVER GREENWAY: VISTRON SECTION -- .5 Acres
Ownership: City/Conservation Commission
Zoning: GI
Location: Mill River, Leeds (east bank)
References: Map ID: 23C-90
Book 1837, Page 222
Acquisition: Land donation from Vistron Corporation (6/19/1975)
Partners: None

MILL RIVER GREENWAY: YANKEE HILL SECTION - 4.60 Acres
Ownership: City/Conservation Commission
Zoning: SR
Location: Mill River, Bay State (west bank)
References: Map ID: 30D-2
Book 3407, Page 304--Donation from James Graham, Yankee Hill Machine Co. (1989)
Plan Book 162, Page 67
Signage: A "Mill River Greenway, Yankee Hill Section" sign was installed in 1989.
Partners: None

Parcel has a steep hillside between the Mill River and former state hospital land, now owned by Department of Agricultural Resources.

MINERAL HILLS CONSERVATION AREA - 85 Acres (LaPalme) + 1.1 Acres (Turkey Hill)
Ownership: City/Conservation Commission
Zoning: RR
Location: West side Sylvester Road (85 Acres), North side Turkey Hill (1.1 acres)
References: Map ID: 28-70

Special Permit for reduction of frontage for building lots: Book 4570, Page 93
Deed LaPalme Parcel: Book 4570, Page 97 (bargain sale, city & neighborhood donations 10/12/94)
Sylvester Road Plan Book 177, Pages 164 & 167
Sylvester Road Right-of-way to building lots: Book 4570, Page 102
Sylvester Road driveway Wetlands Permit: Book 4570, Page 87
Sylvester Road APR: Book 4607, Page 172 (12/27/94)
Drainage and utility easements of record
Turkey Hill Deed Book 7616, Page 95 (Permit exacted donation 12/11/03)
Turkey Hill Plan Book 198, Page 23
Disclosures filed DCPO, (Sylvester also recorded with deed.
LaPalme Conservation Area title insurance policy (Commonwealth Land Title) on file with City Clerk, filed with 4/7/1994 City Council resolution)
Commission voted to permanently name area Mineral Hills Conservation Area on 11/13/1995 (as requested by LaPalme).
Survey for Turkey Hill Road parcel south of Turkey Hill-- Plan Book 211, Page 12.

This parcel has 7 acres of farmland along Sylvester Road, with the remainder of the property consisting of wooded uplands and wetlands. A network of trails runs through the property. The one-acre parcel on Turkey Hill Road does not currently connect, but has the potential to do so in the future.

APR restrictions require that the City go to bid as needed to insure that the field remains in active agriculture and place restrictions on the location of future trails and parking lots.

Needed improvements:

A two-car parking lot is needed along the southern edge of the frontage on Sylvester Road.
A trail, including a large wetland crossing, is needed from this parking lot to the network of trails farther back. The Sylvester Road neighborhood should build this trail, with the Commission providing materials.

Partners: None

PARSON'S BROOK CONSERVATION AREA – 27.603 Acres
Ownership: City/Conservation Commission
Zoning: SR
Location: The Plantations subdivision
References: Council Resolution 6/20/02
Deed: Book 6703, Page 294 (Condition of Cluster Permit, 7/2/02)

Small conservation area with opportunity for walking trails and includes frontage on Parsons Brook.

THE RIDGE CONSERVATION AREA - 36.5 Acres
Ownership: City of Northampton/Conservation Commission
Zoning: RR
Location: Ridge View Road and Drury Lane
References: Deed recorded Book 8281, Page 88 (5/31/2005)
Plans recorded at Plan Book 205, Page 71-86 (4/7/2005)

City Council Resolution recorded Book 8550, Page 220 (4/21/2005)

Subject to City of Northampton holding the right to build multi-use trail across the property (which is consistent with City Transportation Plan)

RAINBOW BEACH CONSERVATION AREA - 55 Acres
Ownership: City/Conservation Commission
Zoning: SC
Location: Rainbow Road, Connecticut River
References: Map ID: 33-27 / Book 1966, Page 321
Acquisition: Self-help, city (7/28/1977)

A conservation area covered with river bottomland hardwoods and a narrow beach area of river sediment deposits. This area is located along the Connecticut River and receives moderately heavy summer use (swimming and unauthorized camping) by motor boaters. This area is used for nature study and the floodplain forest and beach provide habitat for endangered plant and animal species.

This site is located between two riverfront parcels owned by the Massachusetts Division of Fisheries and Wildlife (20+ acre Rainbow Beach to the north and 15+ acre Shepard's Island to the south). To prevent illegal use, the Division of Fisheries and Wildlife gated Young Rainbow Road (the Conservation Commission has a key) and the Environmental Police have been active in preventing vehicles from driving in the conservation area. The Division has placed and is maintaining no vehicle and no camping signs.

The City-owned Rainbow Beach is slowly growing from river deposition. Mean accretion (deposition minus erosion) is 15 to 18 square feet per year (Anderson, Anthony. 1973. Vegetation Patterns and Fluvial Processes on a Connecticut River point bar. B.A. Thesis, Amherst College; Doherty, Adrian, Jr., 1974. Stratigraphy and Geomorphology of the Rainbow Beach Point Bar, BA Thesis, Amherst College). (Sheppards Island is also growing, but the state owned Rainbow Beach appears to have more erosion then deposition).

Partners: Management in cooperation with Memorandum of Agreement with the Division of Fisheries and Wildlife.

RIDGE CONSERVATION AREA – 36.50 Acres
Ownership: City/Conservation Commission
Zoning: RR
Location: Ridge View Road
References: Map ID:
Book 8281, Page 88 (5/31/2005) Transfer to City
Book 8550, Page 220 (12/9/2005) City Council resolution authorizing transfer
Plan Book 205, Page 75-77 (5/31/2005) Survey of conservation area
Acquisition: Donation as condition of The Ridge cluster subdivision approval

Conservation area includes walking trails that will eventually be linked to abutting property. Developer is responsible for building the trails with the City, through the Office of Planning and Development, retaining the right to extend the trail to the easterly property boundary.

ROBERTS HILL CONSERVATION AREA - 104 Acres

Ownership: City/Conservation Commission
Zoning: RR
Location: Mill River, Old Shepherd Rd, South Main St, Dimock Rd, Chesterfield Rd, Reservoir Rd, Leeds
References: Map ID: 10D-1
Roberts Hill: Book 1840, Page 162; Book 1874, Page 21 (2/26/1976); Book 1939, Page 323 (3/15/1977);
Chesterfield Road land swap: Book 2265, Page 190 (excepting Book 2217, Page 99) (3/31/1982); Plan Book 171, Page 51;
Roberts Hill Overlook: Book 3821, Page 50; Plan Book 172, Page 32.
Trail to Reservoir Road: Book 3963, Page 250; & Plan Book 173, Page 119.
(Escrow for taking of Roberts Hill to be released 11/1994--Ledger Land Acquisition Account);
Acquisition: Roberts Hill: Self-Help, city (1976), Land swap (1981)
Roberts Hill Overlook: Eminent Domain (1991)
Trail to Reservoir Road: Bargain Sale Acquisition (5/29/1992)

This large wooded hill includes cliffs with spectacular views overlooking the Leeds Reservoir (Roberts Hill Overlook, purchased 1991), large amounts of upland forest, and frontage on the Mill River, Water Street, Main Street, Chesterfield Road, and Reservoir Road. It has two small ponds, a stream and a diverse forest. It provides a linkage between the Leeds Reservoir Watershed and swimming area and the Mill River and Look Memorial Park. In 1986, the area was selectively cut to promote and create preferred wildlife habitats. There are several foot trails on the property. The use of the area is moderate. Snowmobiles are permitted only on marked trails approved for use by the Conservation Commission. Trees on Roberts Hill were damaged by a fire (circa 1985) and are now providing wildlife habitat.

Howard's Ice Pond Dam (DCR No. 2-8-214-8) is classified by the Department of Conservation and Recreation Office of Dam Safety as a "low hazard" dam. The City completed a significant reconstruction of the dam and spillways in 1999, using both City funds and Department of Conservation and Recreation Lakes and Ponds funds. The Department of Conservation and Recreation awarded $8000 in grant funds and the City of Northampton paid the remaining $8,700. A total of $13,500 was used for construction and the remaining $3,200 was used for design, inspection and permits. On January 14, 2004 the Office of Dam Safety determined that the dam is no longer under DCR jurisdiction Under MGL C. 253 s 44-48, as amended in 2002, meaning that there are no on-going reporting requirements, as long as the dam continues to be properly maintained.

Signage: A “Roberts Hill Conservation Area, City of Northampton" installed Main St. (1990).
Partners: Leeds Civic Association

ROBERTS HILL WATERSHED CONSERVATION AREA – 12.553 Acres

Ownership: City/Conservation Commission
Zoning: RR
Location: Kennedy Road, Leeds
References: Map ID: 5-54
Lot 2: Book 8068, Page 162 (11/19/2004)—City Council resolution 11/4/2004 (as a

donation of land)
Lot 4: Book 8062, Page 89 (11/12/2004)—City Council resolution 11/4/2004 (as a condition of a special permit)
Plan Book 202, Page 24

Signage: None currently

Partners: Leeds Civic Association (informal arrangement)

This parcel includes uplands, wetlands, and a tributary of the Leeds Reservoir.

SAW MILL HILLS CONSERVATION AREA – 382 Acres

Ownership: City/Conservation Commission

Zoning: RR and URA/ WSP

Location: Avis Circle, Ryan Road, Spring Street, Chesterfield Road

References: Map ID: 22-7 (Avis Circle and Ryan Road)
Avis Circle Book 4759, Page 148 (10/20/1995)- Towne donation with Avis Circle subdivision. Lawyers Title (owner's policy) #13600110645 (10/20/1995)—23.96 acres
Off Chesterfield Rd. Book 5864, Page 246 (1/15/2000)-New Harmony Donation-28.079 acres
Off Golden Dr.--Book____, Page (12/2001)– Donavan Taking–13 Acres
Off Golden Dr.--Book 6491, Page 334 (1/4/2002)–Fungaroli Taking–18.74 Acres
Off Golden Dr.--Confirmatory Deed Book 6576, Page 83-Fungaroli – 18.74 acres
Off Golden Dr.—Deed Book 8075, Page 165—Boyle Donation (11/23/2004)- 17 acres
Avis Circle--Book____, Page (12/2001) – Hawthorne Taking—55 acres
Avis Circle Book 6641, Pages 1 and 11–Curran Taking and Confirmatory Deed (3/21/2002)
Off Chesterfield Rd. Land Court Book 18, Page 65 (8/1/2000)- New Harmony donation 3.93 acres
Avis Circle--Book 5899, Page 311 (3/13/2000)- First American Title (owner's Policy) #20325612 (3/13/00), Donation with Avis Circle subdivision--16.103 acres
Avis Circle--Order of Taking Book 5979, Page 75- Ryan Rd ROW and Sienkiewicz purchase/cluster (88 acres $15,000 city + $5,000 Wharton Trust
Avis Circle-- Confirmatory Deed, Book 5984, Page 206- Sienkiewicz purchase 88 acres)
Ryan Road ROW--Confirmatory Deed Book 5984, Page 203
Avis Circle--Cluster Permit, Book 5945, Page 231 (Sienkiewicz 88 acres plus Right-of-Way)
Avis Circle--Towne purchase mortgage releases: Book 4781, Page 109 and Book 4822, Page 182.
Plan Book 178, Page 223
Plan Book 186, page 97
Plan Book 187, Page 25
Chesterfield Road Right-of-way Book 4851, page 252—(Donation in lieu of c. 61B right-of-first-refusal)

Partners: Informal "Friends of the Saw Mill Hills"

This area has wooded land within Zone II and III of the City's drinking water aquifer containing rich vernal pools (see Vernal Pools and Rediscovering Northampton). The conservation area includes a right-of-way to Avis Circle and provides access to an eventual trail system through the Saw Mill Hills, possibly

as part of a significantly expanded Saw Mill Hills Conservation Area. The Right-of-way from Chesterfield Road provides access to a detached section of Saw Mill Hills Conservation Area. A Right-of-Way from Spring Street provides additional access. A Forest Stewardship Plan has been prepared for a portion of this area (see management section).

WEST FARMS CONSERVATION AREA – 15.86 Acres

Ownership: City/Conservation Commission
Zoning: SR
Location: Off Glendale Road and Westhampton Road (Route 66)
References: Map ID:
Book 7271 Page 216 (6/23/2003)- West Farms Transfer to the Conservation Commission
Book 6137, Page 317 (3/2/2001)West Farms initial taking
Book 6137, Page 327 (3/2/2001)West Farms initial confirmatory deed
Book 7231, Page 15 (6/2/2003) surplus parcel to Leona V. Pakutinski
Book 7241, Page 206 (5/23/2003) surplus parcel to Nancy L. Kingsley
Book 7231, Page 19 (6/2/2003) surplus parcel to Marisa and Peter Ludwig
Book 7231, Page 1 (6/2/2003) surplus parcel to Donald and Norma Sadusky
Book 7282, Page 237 (6/27/2003) surplus parcel to Darleen and Edward LaFond
Book 7347, Page 320 affordable housing to Habitat for Humanity with septic system easement
Book 8273, Page 166 (05/25/2005)Recreation parcel to Recreation Commission
Book _____, Page _____ , market rate lot sold
(City still retains one building lot for future sale)
Plan Book 195, Page 98
Book 7133, Page 23 (4/8/2003) Comprehensive Permit
Acquisition: Taking Purchase as part of limited development/landfill buffer
Paid by CDBG (affordable housing and cluster related open space) and
Landfill enterprise (landfill buffer)

This is Conservation land with a simple trail from Glendale Road to the Recreation Area off Route 66.

PERMANENTLY PROTECTED NON-PROFIT LAND--OPEN TO THE PUBLIC

ARCADIA WILDLIFE SANCTUARY - 650+ Acres

Ownership: Massachusetts Audubon Society
Zoning: SC-Flood Zone
Location: Connecticut River Ox-Bow
References: Map ID: 38D-70; (Book 3114, Page 29 & Book 3316, Page 1)
38D-73: (Book 1880. Page 241)
38D-77; (Book 3114, Page 29)
38D-75: (Book 1880, Page 241; Book 2091, P 126; Book 3199, P. 238)
45-63; (Book 1772, P. 199)
45-65; (bridle path)
45-67; (Book 12 (doc 5238), Page 44)
45-10 (including former 45-13; 45-54; (Book 3114, Page 29); 45-60; 52-01 (doc 5238), Page 44 & Book 1538, Page 277; Book 1497, P 25;Book 1772, Page 199; Book 2260, P. 100))

45-20 (including former 45-21)
45-45 (including former 45-46, 45-47, 45-48, 45-49, 45-51, 45-65 (bridle path))
45-1, 45-3, 45,4, 45-5, 45-6, 45-7, 45-8, 45-9, 45-10, 45-11, 45-12, 45-22, 45-55, 45-56, 38C-68 (Book 7662, Page 85, 1/23/2004 from Mitchell G. Watras, Jr. for $218,725)

Arcadia Nature Center and Wildlife Sanctuary has varied habitats, wetlands, and the last mile of the Mill River before it connects with the Connecticut River. Arcadia offers nature study, courses and workshops, hiking (over five miles of trails), guided tours, slide presentations, a natural science library, vacation day camps, and a 100-seat auditorium with audiovisual equipment. It receives heavy regional use throughout the year. The former Easthampton Trolly Line donated from Smith College to Mass. Audubon and is now part of Arcadia (Conservation Restriction on trolley line merged with fee ownership). Conservation Restriction on Map ID 38D, Parcel 70 held by Pascommuck Conservation Trust)

CHILDS PARK - 30 Acres
Ownership: Childs Park Foundation, Inc.
Location: North Elm Street, Woodlawn Avenue and Prospect Street
Zoning: URA
References: Map ID: 24C-193
Book 1103, Page 147 (1951)

This heavily used park is located close to the downtown and densely populated residential areas. It is beautifully landscaped (trees, shrubs, flowers, rose garden) and has a scenic drive winding through it. There are two large open spaces as well as a large wooded area. There are no picnic or garbage facilities at the site. Except for running, most active sports are prohibited.

PERMANENTLY PROTECTED CONSERVATION OR AGRICULTURAL LAND-PRIVATE OWNERS (RESTRICTIONS, EASEMENTS & RIGHTS-OF-WAY)

ATWOOD DRIVE CONSERVATION RESTRICTION - 8.019 Acres
Ownership: Fee: private (O&S Partnership) No public access
CR: City of Northampton, through the Conservation Commission
Zoning: SC
Location: Off Atwood Drive
References: Map ID: 46-012-001; Book 5796, Page 82
Acquisition: CR retained by City when parcel sold as surplus unnecessary for city needs.

Property is in the ten-year flood plain of the Connecticut River and contains sensitive wetlands.

BEAR HILL RECREATION AREA
fee ownership: Bridge Road LLC
Zoning: URA
Location: Bridge Road on west side of JFK Middle School
References: CR recorded at Book 8791, Page 28 (7/12/2006) Plan Book 211, Page 51
Consideration: Related to permit condition for Bear Hill

Common open space: managed and controlled by Northampton Conservation Commission
Active recreation open space: managed and controlled by Northampton Recreation Commission

Property provides recreation field, sledding hill, and undisturbed natural space and surrounds the Bear Hill Estates housing project.

BURT'S PIT ROAD CONSERVATION RESTRICTION - 2.16 Acres

Ownership: Elaine Boetlcher
CR: Conservation Commission
Zoning: SR
Location: Off Woods Rd. and Burts Pit Rd.
References: Book 5981, Page 388
Acquisition: CR Retained by City when Parcel sold as surplus to City need (7/12/2000).

Land contains valuable wetlands.

DUNPHY DRIVE/WHITE OAKS EASEMENT – 0.1 Acres

Ownership: Private
Easement: Conservation Commission
Zoning: SR
Location: Between Dunphy Drive cul-de-sac and Westhampton Road/Route 66
Reference: Book 7245, Page 275 (6/9/2003), Plan Book 196, Page 10
Acquisition: Donated as a condition of a Special Permit (4/30/2003)

Easement is a short walking trail easement to connect these two streets.

HISTORIC MILL RIVER GREENBELT CONSERVATION RESTRICTION AND ROW – .3 Acres

Ownership: Fee: Private (Valley Community Development Corporation)
CR & ROW: Conservation Commission
Zoning: URC
Location: Off Michelman Avenue on historic Mill River
References: Map ID 32C-141; (foreclosed on: Plan Book 163, Page 48; Book 3541, Page 87) New: Plan Book 194, Page63; Book 6914, Pages 135 & 137.
Acquisition: Donation (4/3/1990 and 12/3/2002)

A right-of-way and conservation restriction was granted for the Historic Mill River frontage adjoining Mill Bank II condominiums. Title to the original CR and easement were lost by foreclosure, but a new CR was granted in 2002.

FITZGERALD LAKE--ANCIPORCH FOREST LEGACY TRACT- 36 Acres

Ownership: Fee: Private (Anciporch)
CR: United States Forest Service
Zoning: RR & WP
Location: Boggy Meadow Road
References: Map ID 13-37; Book 4785, Page 150.
Acquisition: USFS purchase (12/4/1995), local match from purchase of Cookes Pasture.

This has a conservation restriction on forest and wetland, with **no** public right-of-way. This parcel is key to the ecological protection of the Fitzgerald Lake Conservation Area. Although in a different drainage basin then most of the conservation area, it contains the headwaters of a stream that has caused serious

flooding in the past and contains a large productive wetland.

FITZGERALD LAKE CONSERVATION AREA--LATHROP COMMUNITY CONSERVATION RESTRICTION - 14 Acres

Ownership: Fee: Lathrop Community
CR: City
Zoning: RR
Location: Boggy Meadow Road, Lathrop Community (abuts Pines Edge Conservation Area)
References: CR: Book 3696, Page 9 (10/9/1989): Map ID: 18C-141
Boundary Line Agreement: Book 8155, Page 50 (2/4/2005)
Boundary Line Agreement Partial Bank Release Book 8155, Page 56
Boundary Line Agreement Plan Book 152, Page 36
Acquisition: Donation (cluster) (3/19/1991)

Land remains privately owned with no public access, but the conservation restriction prevents its development. The property protects sensitive stream and riparian environments from development. The Conservation Commission has right to enforce restriction.

FITZGERALD LAKE CONSERVATION RESTRICTION (ROBINSON, CR #32)-- 4.4692 ACRES

Ownership: fee: Stephen and Heidi Robinson
CR: City of Northampton through the Conservation Commission
Zoning: RR
Location: 599 Coles Meadow Road
References: Book 8579, Page 1 (1/4/2006, donation in return for right-of-first-refusal release) and Plan Book 208, Page 91 (1/4/2006)

Description: CR primarily intended to preserve Hatfield's water supply and Fitzgerald Lake area wildlife habitat. Parcel is landlocked but the CR grants the city a right for defined walking trails on the property if the city ever acquires rights for a trail to the edge of the property.

ICE POND CONSERVATION AREA CONSERVATION RESTRICTION- 3.2 Acres

Ownership: Fee: Private (various lot owners)
CR: City of Northampton, through its Conservation Commission
Zoning: SR
Location: Westhampton Road (Route 66) and Ice Pond Drive
References: Book 7581, 183 (CR 11/3/2003) and Book 7581, Page 214 (mortgage subordination 10/9/2003).

Acquisition: Donation, as a condition of a cluster special permit and subdivision

Discontinuous holdings that fills some of the gaps in the abutting Ice Pond Conservation Area. Public has full rights to cross property and Conservation Commission has full rights to build trails without restriction.

NORTHAMPTON HOUSING AUTHORITY/HAP, INC EASEMENT

Ownership: Private
Easement: City of Northampton/Planning Board
Zoning:
Location: Along Mill River between West Street and Smith College Athletic Fields
References: Book 183, Page 3
Book 8915, Page 106

Donated as a condition of a Special Permit (07/20/2006)-Housing Authority Board voted on 10/16/2006 to grant an eight foot easement over the easterly most portion of an existing paved driveway that runs north from West Street

PARK HILL ROAD AGRICULTURAL PRESERVATION RESTRICTION: ADAMS FARM REALTY TRUST, GEORGE ADAMS - 72.25 acres
Ownership: Fee Private--No Public Access
APR: Department of Agricultural Resources
Zoning: SR
Location: Florence Road (adjacent to Park Hill Rd. APR)
References: Map ID: 43-15, 44-50 & 44-54; Book 2400, Page 109
Acquisition: Department of Agricultural Resources APR Program

Land remains privately owned with no public access, but agricultural preservation restriction (APR) prevents its development. The Department of Agricultural Resources enforces the restriction.

PARK HILL ROAD AGRICULTURAL PRESERVATION RESTRICTION: GRAY/ PEPPARD - 30 Acres (20 acres of woods plus 10 acres of fields)
Ownership: Gray/Peppard – City holds APR
References: Plan Book 187, Page 253, Map ID: 61b
Deed, Book 6093, Page 296
Mortgage, Book 6093, Page 305
APR & Deed to Gray/Peppard, Book 6093, Page 317
Deed, Book 6093, Page 337 (Goulet to City)
Deed Release, Book 6100, Page 298, Mortgage Release $225,000
Assignment of co-holding – Book 6119, Page 264 (2/1/01)
Affidavit and appraisal – Book 6117, page 265 (2/1/01)
DAR Assignment Book____, Page____
Acquisition: Donation from Gray/Peppard. (12/22/2000)

PARK HILL ROAD AGRICULTURAL PRESERVATION RESTRICTION: KIDDER - 47 Acres
Ownership: Fee: Private--No Public Access
APR: City and Department of Agricultural Resources (jointly held)
Zoning: SR
Location: Park Hill Road (adjacent to Adams APR)
References: Book 3535, Page 323, Book 2685, Page 193 & 196; Map ID: 43-119 or 44-51
Acquisition: Department of Agricultural Resources APR program, city (1990)

Land remains privately owned with no public access, but agricultural preservation restriction (APR) prevents its development. Conservation Commission and Department of Agricultural Resources enforce the restriction.

PARK HILL ROAD AGRICULTURAL PRESERVATION RESTRICTION: MICKA – 57 Acres (38 acres are in Northampton, the remainder is located in Easthampton)

Ownership:	Fee: Private--No Public Access
APR:	City and Commonwealth of Massachusetts, through the Department of Agricultural Resources (jointly held)
Zoning:	SR
Location:	Park Hill Road (in Northampton and Easthampton)
References:	APR at Book 5449, Page 275 and Assignment VLF to OFA Book 5964, page 254 Plan Book 184, Page 14
Acquisition:	Valley Land Fund and City (1999). State Food and Agricultural purchased Valley Land Funds interest. (6/22/2000)
Abuts:	Abuts Parsons Brook Conservation Restriction

PARK HILL ROAD CONSERVATION RESTRICTION: GRAY/ PEPPARD et. al. – 23.203 acres

Ownership:	Fee: Private – No public access
CR:	City
Zoning:	SR
Location:	Between Park Hill Road and Westhampton Road
References:	Book 6472, Page 277; Plan Book 190, Page 114
Acquisition:	Donation
Abuts:	Park Hill Road APR: Micka

PARK HILL RD. CONSERVATION RESTRICTION: LATHROP COMMUNITY—11.215 acres

Ownership:	Fee: Private – Public access allowed, but currently landlocked
CR:	City
Zoning:	SR
Location:	Between Park Hill Road and Florence Road
References:	Book 8155, Page 57; Plan Book 204, Page 22, 2004
Acquisition:	Non-financial consideration (boundary line agreement elsewhere)
Abuts:	Park Hill Road APR: Kidder

ROCKY HILL COHOUSING CONSERVATION RESTRICTION –10.27 acres

Ownership:	Rocky Hill Cohousing (see separate trail easement)
CR owned:	City
Zoning:	SR
Location:	Off Florence Road
References:	Book 8082, Page 261 (11/29/2004), with subordination at Book 8082, Page 274 Conservation deed restriction on lot 8, Book 8166, Page 227
Acquisition:	Donation as a condition of cluster subdivision approval
Abuts:	Pathways Cohousing trail easement

STATE HOSPITAL AGRICULTURAL LAND-- DRUMLIN AND MILL RIVER - 273.9 Acres (37

Acres with conservation restrictions and Right of Way)
Ownership: Massachusetts Department of Agricultural Resources
Protection: Agricultural Preservation Restrictions on 273.9 Acres and Conservation

Restriction and ROW on 37 Acres: City (enforced by Conservation Commission) and DAR (joint ownership)

See full entry under "Permanently Protected Conservation, Park or Agricultural Land--State Agencies" for more information.

STATE HOSPITAL/ HOSPITAL HILL- 20.1 Acres
Ownership: Trustees of Smith College
Protection: Open-space Restriction and Right-of-Way
References: Book 5900, Page 23 and Plan Book 183, Page 1
Location: Hospital Hill, West Street (Parcel K)

STATE HOSPITAL/ MILL RIVER- 8.1 Acres
Ownership: Commonwealth of Massachusetts, Dept. of Capital Asset Management
Protection: Conservation Restriction and Right-of-Way
References: Book 5898, Page 39 and Plan Book 183, Page 1 (Conservation Restriction)
Book 6925, Page 302 (Fee interest to Hospital Hill LLC)
Location: Mill River, behind main State Hospital campus (abuts State Hospital agricultural land conservation restriction and Smith College open-space restriction) (area L-1 and L-2)

SEVEN BRAVO TWO/ NORTHAMPTON AIRPORT CONSERVATION RESTRICTION 3.82 acres
Ownership: Seven Bravo Two, LLC
CR: City of Northampton Conservation Commission
Zoning: Special Conservancy
Location: Riverbank Road
References: Boundary Line Agreement Book 8332, Page 139 (7/5/2005); Conservation Restriction Book 832, Page 148 (7/5/2005); Subordination Agreement Book 8332, Page 162 (7/5/2005); Survey Plan Book 182, Page 29 and 204, Page 83

There is a Conservation Restriction on the parcel of land abutting the Connecticut River. Property owner retains the right to build a dock on the river.

PERMANENTLY PROTECTED PARK AND RECREATION LAND- CITY OF NORTHAMPTON AGENCIES

Properties acquired for park and recreation purposes are considered permanently protected properties, and can only be sold with City Council and, in accordance with Article 97 of the Constitution of the Commonwealth of Massachusetts, state legislature approval. Some of recreation areas listed below may have been purchased for non-recreation uses and then converted to recreation areas. These areas would not have the protection provided by Article 97 of the constitution

AGNES FOX FIELD RECREATION AREA - 1.61 Acres

Ownership: City
Location: State St. and Church St.
Zoning: URC
Management: Recreation Commission
Maintenance: DPW, Recreation Division
References: Map ID: 24D-120; Book 1195, Page 85
Equipment: Grassed play area
Basketball court
Rest room building
Playground equipment

The grassed play area covers a large part of the site. This area is heavily used by local residents.

ARCANUM FIELD RECREATION AREA - 8.49 Acres
Ownership: City
Location: Bridge Rd., N. Farms Rd. & Mountain St.
Zoning: URA
Management: Recreation Commission
Maintenance: DPW, Recreation Division
References: Map ID: 12C-19
Book 1252, Page 404
Urban-Self Help Project Agreement B 1997

Equipment: Two ball diamonds; Soccer field; Field house; All-purpose paved area used for basketball, street hockey and dances; Playground equipment
Arcanum is a heavily used year-round recreational area.

CHILDS CITY PARK
Ownership: City of Northampton
Location: Elm St. and North Elm St. (by Northampton High School)
References: Will of Annie Childs, Article Fifth

Small island between High School and Elm Street. This is owned by the City and is separate from the privately owned Child's Park across Elm Street.

COMMUNITY GARDENS, NORTHAMPTON STATE HOSPITAL- 8.086 Acres
Ownership: City of Northampton (Acquired for Parks & Recreation, subject to Article 97)
Location: Burts Pit Road
Zoning: RR
Management: Northampton Recreation Commission
Maintenance: DPW, Recreation Division
References: Map ID: 30D-7
Parcel G, Northampton State Hospital
Chapters 86 & 307 the Acts of 1994
Deed: Book 5558, Page 13, Plan Book 183, Plan 1

Heavily used community garden. Site does not have rich agricultural soils, but soils have been worked for gardens for many years (being part of the State Hospital operation prior to becoming a community

garden) and provide excellent gardening space. Although most gardeners who request plots can be accommodated, the best plots go very quickly. An easement retained by the Commonwealth would allow the right of access across the community gardens, but only in a location approved by the city.

GOTHIC STREET POCKET PARK - 0.15 Acres

Ownership:	Fee: Gothic Street Condominium Association
Easement:	Northampton Recreation Commission
Zoning:	URC
Location:	Gothic Street
References:	Part of Map ID: 31B-230
	Special Permit to Gothic Street Development Partnership
	Doc #93-02065

Recreation Easement allows public to pass and pass again, for passive recreation, during daylight hours. Recreation Commission has no responsibilities except enforcement.

HALLIGAN-DALEY HISTORIC PARK, NORTHAMPTON STATE HOSPITAL- 0.5 Acres

Ownership:	City, under care and custody of Recreation Commission (Acquired for Parks & Recreation, subject to Article 97)
Location:	Prince Street, Route 66
Zoning:	URB/Planned Village
Management:	Recreation Commission and St. Patrick's Association
Maintenance:	DPW, Recreation Division and St. Patrick's Association
References:	Acts of 1994
	1998 Deed

LOOK PARK - 157 Acres

Ownership:	City of Northampton (Acquired for Parks & Recreation, subject to Article 97)
Management:	Trustees of Frank Newhall Look Memorial Park
Location:	Route 9, Mill River
References:	Map ID 16A-2 & 16B-41
	Original Grant: Map ID 16A-2; Book 846, Page 532 (6/4/28).
	RR Acquisition: Book 1745, Page 309 (11/20/1973)
Funding:	Core park donated with endowment; Federal Land and Water Conservation Fund (#25-00188 Look Park Comfort Station, #25-00304 & 00326 Look Park Improvements Phase I & II); Property subject to Mass. Article 97 and Federal FLWCF Act 6(f)

A beautiful large park maintained under the guidance of trustees and funded by entrance fees and an endowment. There are numerous facilities, including: natural land and water areas, picnicking facilities, six tennis courts, many play fields for baseball, volleyball, football, softball, basketball and shuffleboard, train rides, food stands and marked trails. Other activities available are paddleboats, cross-country skiing, ice-skating, band concerts and theater productions. Some equipment may be rented at the site; lockers, drinking water and bike racks are available. This area receives very heavy recreational use (regional) throughout the year.

The Garden House at Look Park is the area's premier community and banquet facility, providing superior accommodations for public and private parties, meetings, and community events.

Located in one of New England's finest parks, the Garden House stands on the site of the former Look Park pool building, a nostalgic Northampton landmark built in 1930. The restoration of the building, now unsurpassed in comfort and convenience, keeps faith with the Mission style architecture of the earlier period.

MAIN STREET STREETSCAPE PARK- 2,328 square feet (First Churches) + (Fleet Bank)

Ownership:	City
Easement:	First Church of Christ in Northampton (for area in front of church)
Location:	Main Street, Northampton, at intersection with Center Street
Zoning:	CBD
Management:	First Church for Easement I. City for Art Kiosk
References:	Book 7562, Page 117 (10/9/2003) First Church Boundary Line Agreement
	Plan Book 195, Page 26 (12/27/2002) Boundary Line Agreement Plan
	Book 7983, Page 205 (9/10/2004) First Church Boundary Line Agreement (II)
	Plan Book 202, Page 21 (9/10/2004) First Church Boundary Agreement Plan

This small but heavily used park includes the city's art kiosk installation, which is maintained by the City, and a lawn in front of First Churches, which is maintained by the Church but for which the public has the right to use.

MAINE'S FIELD RECREATION AREA - 14.47 Acres (Maine Brother Recreation Grounds)

Ownership:	City
Location:	Riverside Drive, Bay State
Zoning:	URB
Management:	Recreation Commission
Maintenance:	DPW, Recreation Division
References:	Map 23C, Parcel 31
	Book 778, Page 177
Equipment:	Lighted ball diamond
	Two sand volleyball courts
	Rest room building
	Storage building
	Pavilion with tables
	Paved parking
	Playground equipment

This partially wooded recreation area borders the Mill River. It receives extremely heavy spring, summer and fall use by residents' citywide. This area is subject to heavy spring floods.

DAVID B. MUSANTE, JR., BEACH - 7.46 Acres

Ownership:	City-DPW, Water Division
Location:	Reservoir Road
References:	Map ID: 10-6
Funding:	1989-1991 capital improvements: City ($62,200), CDBG for handicap accessibility ($10,000), Massachusetts Urban Self Help Program (1989 award--$152,800) and Federal Land and Water Conservation Funds (1988 award—Project #25-00387 for beach,

reservoir and dam improvements--$200,000)
Property subject to Federal FLWCF Act 6(f)

Lower Roberts Reservoir or Leeds Reservoir, serves as public swimming area. The former water supply reservoir was converted to a recreation area (1989-1991). The project consisted of converting the reservoir to a swimming area, adding a beach, a picnic area, a parking lot, and a facilities and restroom building. A trail into Roberts Hill Conservation Area starts from this recreation area.

NAGLE DOWNTOWN WALKWAY - 2.5 Acres

Ownership: Recreation Commission
Zoning: CB, GB
Location: Between Main Street and Old South Street parking lot
References: Map ID 32C-333 & 32C-335;
Entire Walkway: Plan Book 134, Page 96; Book 2582, Page 243 (6/28/1985)
Project Agreements: Book 2634, Page 331 & Book 3752, Page 40 (funded Urban Self-help and city, 1985)
Transfer to Recreation: Book 3752, Page 35;
Maintenance & Easements: Plan Book 166, Page 89; Book 3561, Page 271 (5/15/1990-Hampton Housing Associates);
Plan Book 167, Page 121-123 (& at DPW); Book 3561, Page 275, (5/15/1990-Gleasons);
Book 3561, Page 279 (5/15/1990-Mass. Electric);
Book 3834, Page 265 (Union Square Realty Trust--Depot)
Plan Book 171, Page 36; Book 3752, Page 31 (Masters).
Signage: "A Cooperative Conservation Project Between the Northampton Recreation Commission and the Commonwealth of Massachusetts" installed in 1991.

There is a handicap accessible walkway on an old railroad right-of-way, including a section along the Historic Mill River. A small park just east of Pleasant Street was built by and is maintained by the Gleasons, in return for a right-of-way across the park to their building. Hampton Court holds a right-of-way across the Hampden Avenue Parking Lot and in return maintains the walkway from Pleasant Street to the parking lot.

PULASKI PARK (formally known as Main Street City Park) - 1 Acre

Ownership: City of Northampton (Acquired for Parks & Recreation, subject to Article 97)
Zoning: CB
Location: Main Street and New South Street
Maintenance: DPW
References: Book 632: 333 - 335 and 429 (1908) Edward H.R. Lyman
Book 457: 21 - 25 (1893) Edward H. R. Lyman with reversion clause
Book 609, p. 319 (1906) J. B. O'Donnell
Plan in 1905, Book 593, Page 51 (Plan)
Book 663, Page 33(August 22, 1906)

A small rectangular park with memorials, benches, and paths for sitting and strolling, this site is located in the heart of downtown Northampton and helps define downtown. It receives extremely heavy citywide use throughout the year. Chronological history:

1904 - A Main Street City Park proposed.

1906 - Contributions of over $27,000 to purchase Prindle and Holley properties for park.
1906- Aldermen authorized purchase of said Holley and Prindle properties for Park purposes forever. The Holley and Prindle parcels on Main Street ordered to be taken in fee by the City of Northampton for use as a public park.
1907 - April 15 - Plans for the City Park selected.
1907 - Transfer of funds ($4,963), to Park Commissioners for development of Main Street Park.
1907 - Protest by owners of Holley and Prindle properties.
1907 - Architect Joseph Gabringer of New York selected.
1907 - Plan of the Park. There is an acre in the two parcels taken for the Park. The design is made so as to give it the appearance of being much larger, the perspective being so arranged, the walks laid out with that intention. At intervals, beside the curved walks, concrete seats will be placed in the shrubbery where persons can spend moments near others but practically shut off from them by dense shrubbery, hence undisturbed.
1907 - Work started. Prindle House moved.
1908 - Settlement of claims of the former owners of the Holley and Prindle sites.
1908 - Conditional Transfer of the land in the rear of the Academy of Music by the Executors of the estate of Edward H. R. Lyman, under the condition that it be devoted solely and exclusively for the purposes of a public park. That if used otherwise the property reverts to the heirs of Edward H. R. Lyman.
1911 - Purchase of the Prindle property from for use as a Public Park in conjunction with the Holley parcel.
1934 - Letter opposing taking the Main Street Public park for a high school site.
1954 - Opposition to taking any part of the Park for off-street parking.
1958 - Letters to the Editor of the Gazette opposing the plan of taking any part of the Main Street City Park for an off-street parking place for automobiles.
1958 - Plan of off-street parking withdrawn at City Council Meeting.
197 - Pulaski Park Renovation $47,200. Huntley Associates did design, construction plans and construction documents.

SHELDON FIELD RECREATION AREA- 12.848 Acres

Ownership:	Northampton Recreation Commission (Subject to Article 97)
Restrictions:	Conservation Restrictions (two) held by the Broad Brook Coalition, Inc.
Location:	Bridge St. & Old Ferry Rd.
Zoning:	URA and Watershed Protection Overlay
Management:	Recreation Commission
Maintenance:	DPW, Recreation Division
References:	Sheldon Conservation Restriction to BBC-Book 5738, page 221 9 (7/15/1999) Sheldon Deed-Book 5738, page 233 (7/15/1999)—10.16 Acres Kielec Conservation Restriction to BBC-Book 8042, Page 190 (Life Estate Release) and Page 191 (CR) (10/28/2004) Kielec Deed-Book 8042, Page 203 (Life Estate Release) and Page 204 (Deed) (10/28/2004)—2.688 Acres Map ID: 25C-84 Book 601, Page 132 Former Lease (interests merged with purchase): Book 1034, Page 521
Equipment:	Four ball diamonds Two basketball courts (and overflow parking lot) Storage building

Rest room building
Playground equipment
Joint Recreation/Park-and-Ride Parking Lot with bicycle lockers (built 2002)

The fields and equipment cover most of this site. Larger grassed areas could be redesigned at different times of the year to support other field layouts. Residents' use this area heavily throughout the spring and summer and lightly in the fall.

VETERANS MEMORIAL FIELD RECREATION AREA - 7.84 Acres

Ownership: City
Location: Off Clark Ave.
Zoning: URB
Management: Recreation Commission
Maintenance: DPW, Recreation Division
References: Map 31D, Parcel 171, License Agreement with Mass Electric for access from West Street (on file at Planning Dept. Recreation Dept., and DPW)
Equipment: Baseball diamond
All-purpose paved area for basketball and street hockey
Soccer field
Rest room building (rehabilitated in 1998)
Unpaved parking area
Playground equipment

This recreation area is heavily used year-round by various leagues, and by residents citywide. The area is currently (2005) undergoing a major rehabilitation.

PERMANENTLY PROTECTED CONSERVATION, PARK OR AGRICULTURAL LAND-STATE AGENCIES

ELWELL STATE PARK - 3.2 Acres

Ownership: Massachusetts Department of Conservation Resources
Zoning: HB, GI, and URB
Location: Damon Road, Bates Street, and Woodmont Road
References: Map ID: 25A-14 (Book 2055, Page 145)--1.347 acres (former County) 9/18/1978
25A-16 (Book 926, Page 285)--0.872 acres (former County) 8/30/37
25A-17 (Book 3255, Page 311)--0 acres 2/6/1985
25A-168 (Book 2546, Page 132)--0.055 acres 2/6/1985

Includes boathouse, and a wheelchair accessible dock on the Connecticut River, a parking lot, part of the Norwottuck Rail Trail, and access to the Trail's most spectacular feature, the bridge across the Connecticut River.

NORWOTTUCK RAIL TRAIL - 6 Acres

Ownership: Massachusetts Department of Conservation Resources
Zoning: HB, GI, SC
Location: Damon Road
References: Map ID: 25A-166 (Book 2546, Page 132)--6.01 acres 2/6/1985
25A-167 (Book 2546, Page 132)-0 acres 2/6/1985

The Norwottuck Rail Trail (total distance is approximately 10 miles) from Northampton to Amherst provides a major recreation and transportation route for non-motorized vehicles, including wheelchairs, and pedestrians. It links to the U. Mass bikeway in Amherst and will eventually link to the Northampton rail trail network. The trail will be extended west from Damon Road to Woodmont Road in 2005.

RAINBOW BEACH - 30.87 Acres

Ownership:	Mass./Div. of Fisheries and Wildlife
Zoning:	SC- flood zone
Location:	Connecticut River
References:	Map ID: 33-33; Book 3410, Page 194; Plan Book 159, Page 97

Just north of the city's Rainbow Beach Conservation Area, this site has valuable wildlife habitat and contains much of the heavily used beach.

SHEPARD'S ISLAND - 15 Acres

Ownership:	Mass./ Div. of Fisheries and Wildlife
Zoning:	SC-flood zone
Location:	Connecticut River
References:	Map ID: 33-30; Book 1766, Page 44 (4/11/1974)

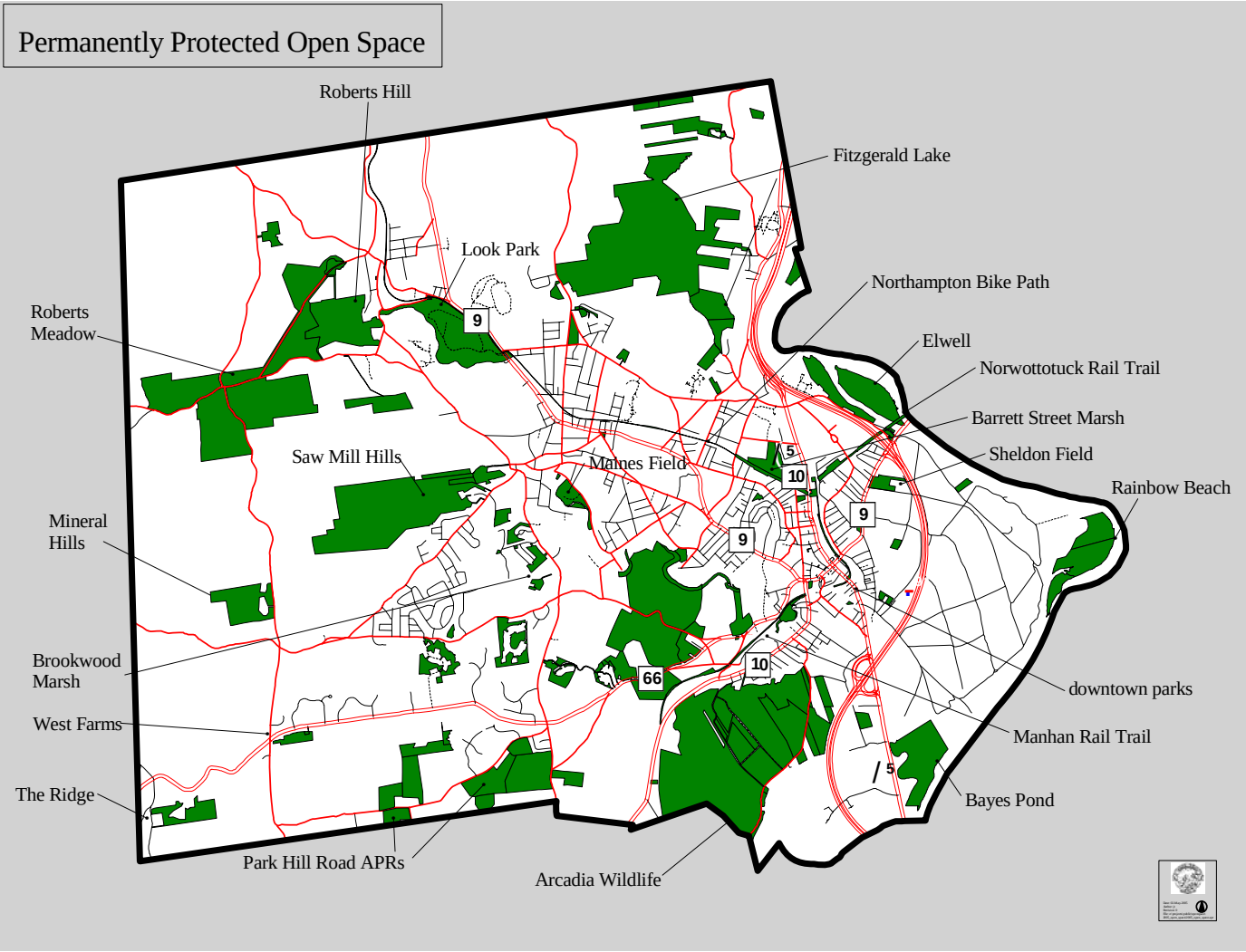
This area is dedicated for wildlife habitats. The site is a former island, now a peninsula that abuts the southerly end of the city's Rainbow Beach Conservation Area.

STATE HOSPITAL AGRICULTURAL LAND--DRUMLIN AND MILL RIVER -- 273.9 Acres (37 with conservation restrictions and ROW)

Ownership:	Fee: Massachusetts Department of Agricultural Resources Agricultural Preservation Restrictions on 273.9 acres: City (enforced by Conservation Commission) and DAR (joint ownership) Conservation Restrictions on ROW on 37 acres: City/Conservation Commission Management; 25 Year lease, renewable 3 times to Smith Vocational School DAR oversees management
Location:	Mill River and Burts Pit Road
Acquisition:	Land in 1800's, transfer to DAR (1984), APR and CR restrictions donated by state (5/7/1990 & 5/23/1990)
Interests:	Conservation restrictions, ROW, Agriculture Preservation Restriction
References:	Part of Map ID: 30D-7; Map ID: 30D-13; Map ID: 37-56 Plan Book 163, Page 46 and 47 Chapter 568, Acts of 1983 APR & ROW: Book 3561, Page 285 CR & ROW: Book 3568, Page 153.

Entire property has agriculture preservation restriction (APR) with a conservation easement and public right-of-way within 100 feet of Mill River and south of Burts Pit Road on "drumlin" above 265' Mean Sea Level. Northampton holds and enforces these restrictions. A rich wetland complex exists near the Mill

River. Ground-nesting birds, including Grasshopper Sparrow (listed as special concern), nest in the spring and summer on the drumlin. Massachusetts Audubon Society conducted a bird census to identify nesting birds in 1990. The fields/woods edge provides excellent blue bird habit. Arcadia placed one blue bird box on the drumlin, 1990, which may now be missing. The Conservation Commission placed ten more blue bird boxes in the woods in 1993.



CITY OF NORTHAMPTON BIKE PATHS, RAIL TRAILS AND RIGHTS OF WAY

MANHAN RAIL TRAIL DOWNTOWN LINK

Ownership: National Grid

Easement: City of Northampton

References: Plan Book 191, Page 83-110; Book 6661, Page 92; Recording 5/31/2002, Book 8388, Page 8 08/11/2005, friendly taking from National Grid
Book 8388, Page 8 Earle/Grove taking from National Grid/O'Connell Oil/Baystate Gas Company
Book 8492, Page 105 confirmatory deed from O'Connell Oil
Book 8492, Page 108 sewer easement under Manhan Trail to O'Connell Oil

Acquisition: Friendly taking and confirmatory deed: 5/2/2002, 07/01/2005
Searle's Confirmatory Deed, Book 8940, Page 175 11/7/2006, $3,895.50.

Right-of-Way for rail trail in 3 sections: (1) from State Street across King Street and along the railroad tracks to Main Street; (2) from Round House parking lot to Earle street. The City-owned Nagle Walkway connects these two sections; (3) Earle Street to the Easthampton/Northampton City Line.

MANHAN RAIL TRAIL PARKING AREA, NSH PARCEL B4
Ownership: City of Northampton
References: 1998 Deed: Book 5558, Page 19, Parcel 3 (Earle Street),
22,839 square feet for parking lot along future Manhan Trail.
Reversion clause to Commonwealth if not used for parking or roads

Provides opportunity for parking lot to serve the Manhan Rail Trail at Earle Street.

MANHAN RAIL TRAIL, REGISTRY OF DEEDS ACCESS TRAIL AND PARKING
Ownership: Commonwealth of Massachusetts
References: Book 5144, Page 152, 6/27/1997
Acquisition: Land donation from Hampshire County
Description: Provides right-of-way ramp to bike path

NORTHAMPTON BIKE PATH - 32.49 acres
Ownership: Fee: National Grid
Right-of-Way: City of Northampton
Location: North end of State Street to Look Park on old RR ROW
References: Map ID: 16B-64, 17C-280, 17C-295, 17C-296, 17C-297, 23B-90, 23B-91, 24A 236, 24A-237; Book 2274, Page 282 (5/3/1982)

Two and a half mile long paved bicycle/rail trail maintained by the DPW. The path goes from downtown, through Florence to just east of Look Memorial Park. The bike path is heavily used throughout the year by bicyclists, skaters and walkers.

MANHAN RAIL TRAIL SPUR--PATHWAYS COHOUSING SECTION- 24,529 square feet
Ownership: Fee: Pathways CoHousing Condominiums
Right-of-Way: City of Northampton, through the Conservation Commission
Location: Rocky Hill CoHousing to Ice Pond Subdivision
References: Order of Taking--Book 7962, Page 177 (8/5/2004)
Confirmatory Deed—Book 8023, Page 144 (10/14/2004)

0.2 mile long right of way for a bikepath connecting Florence Road, Rocky Hill CoHousing, Pathways

CoHousing, Ice Pond Drive, and Route 66.

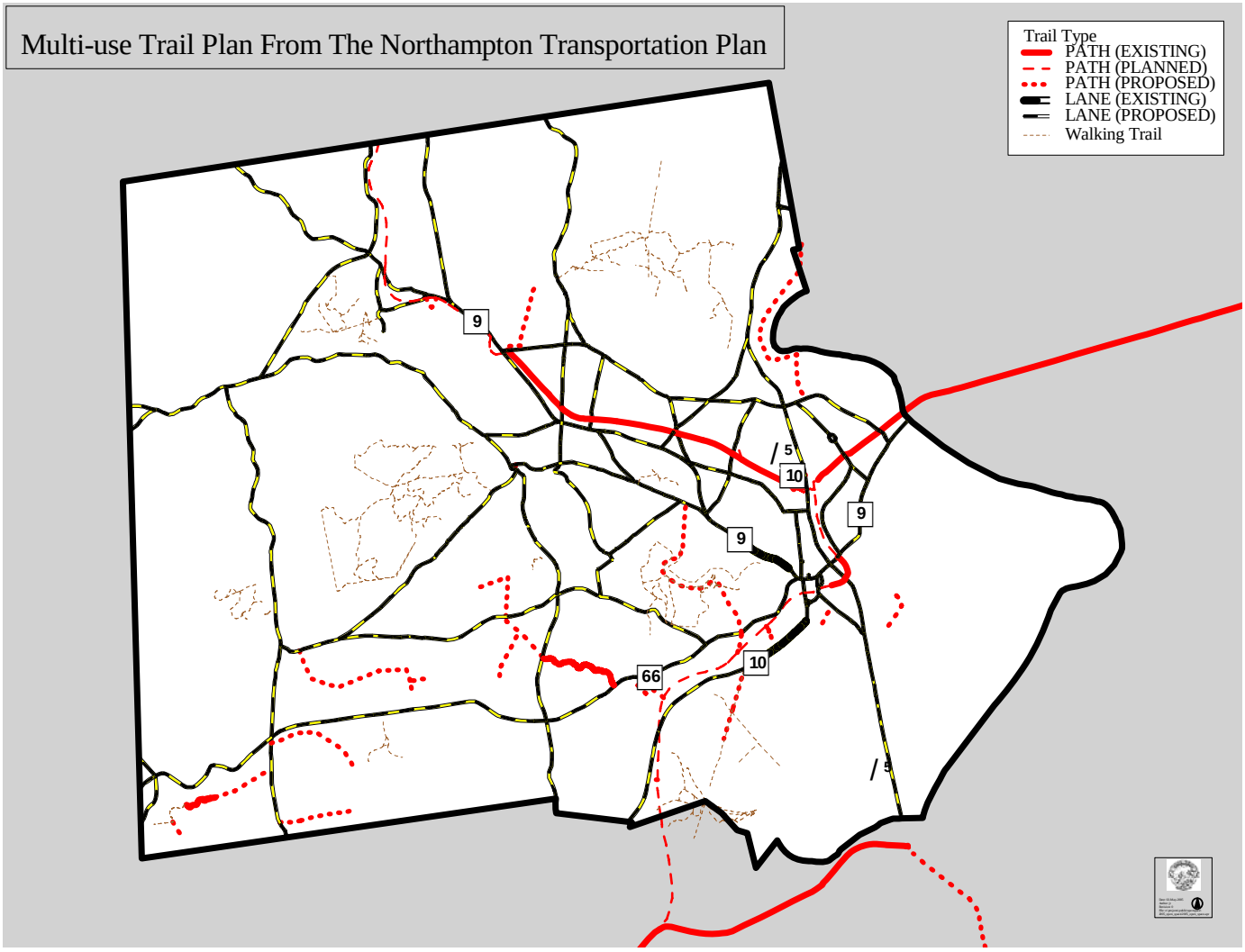
MANHAN RAIL TRAIL SPUR—ROCKY HILL COHOUSING SECTION- 24,000 square feet
Ownership: Fee: Pathways CoHousing Condominiums
Right-of-Way: City of Northampton, through the Conservation Commission
Location: Rocky Hill CoHousing to Pathways CoHousing
References: Book 8082, Page 258 (11/29/2004) with subordination Book 8082, Page 274

0.4 mile long right of way for a portion of bikepath connecting Florence Road, Rocky Hill CoHousing, Pathways CoHousing, Ice Pond Drive, and Route 66.

NORWOTTUCK-NORTHAMPTON BIKE PATH KING STREET SPUR
Ownership: Fee: Stop & Shop / WJG Realty Trust
Right-of-Way: City of Northampton
Location: North end of State Street to King Street signal
References: Land Court certified of title 713, Land Court Book 7, Page 70

Spur trail through Stop & Shop to King Street

LEEDS RAIL TRAIL SPUR
Ownership: Fee: Mass Electric, City of Northampton and others
Right-of-Way City of Northampton
Location: Along Route 9, North of Look Park
References: Book 200, Page 27, 2004, Book 8314, Page 46 06/23/2005



OTHER NON-PERMANENTLY PROTECTED PARK, RECREATION, FOREST LAND-CITY OF NORTHAMPTON

BURTS PIT ROAD RECREATION AREA, PARCEL C - 15.49 Acres
Ownership: City of Northampton (Acquired for general city use)
References: 1998 Deed: Book 5558, Page 19/ Chapters 86 & 307 Acts of 1994

This is a former cornfield to be used as a recreation area with two softball fields and one soccer field. Land is being reserved by the city for a future elementary school site and future fire sub-station, if those are ever needed, to accommodate new growth in this area of town.

SMITH SCHOOL V.A. PARCEL/ FORESTRY STUDIES - 182.1 Acres
Ownership: City/Smith Vocational School
Zoning: SR

Location: Haydenville Road
References: Map ID: 11-2; Book 1267, Page 217 and Book 2961, Page 193 (4/30/1987)

The Smith Vocational School for Forestry Studies uses this large wooded site. The site contains an informal trail that could be used to link to a proposed northern corridor trail and contains land that could allow an extension of that trail to Route 9. It has been suggested in the past that part of this property be used for a future high school site and that some of it be used for affordable housing. Others have indicated a desire to keep this as permanent open space for the use of the Smith School.

SMITH VOCATIONAL AND AGRICULTURAL HIGH SCHOOL Farm and Recreation Areas
Ownership: City/Smith Vocational School
Zoning: UR
Location: Locust Street
References: Map ID: 11-2; Deed: Book 601, Page 287 (12/22/1905)
Will of Oliver Smith: Box 249 #2, Passed-(12/22/1845)

This site contains Smith Vocational School, the original core farm, tennis courts and recreation fields. Contains a public farm trail. There has been a suggestion of the need for a trail or road to improve the linkage between the vocational-agricultural school and the high school.

TRINITY ROW - .5 Acres
Ownership: City
Zoning: URB
Location: Florence
Maintenance: DPW

This is an ornamental open space street park containing a fountain and various memorials. This site receives light year-round local neighborhood use. Benches could increase its potential for use.

LEEDS MEMORIAL - 1.6 Acres
Ownership: City
Zoning: URA
Location: Florence St., opposite the Leeds School.
Maintenance: DPW

A small grassed area; this site contains memorials and is used by Leeds residents. Benches would increase its potential for use.

SOUTH MAIN STREET AND BERKSHIRE TERRACE
Ownership: City
Zoning: URC
Maintenance: DPW

A small grassed corner lot with no facilities.

KOLODZINSKI PARK - .25 Acres
Ownership: City

Zoning: URB
Maintenance: DPW

A small ornamental open space located in the center of Florence. With a fountain and a memorial, this site is lightly used by residents city-wide. Park benches would enhance this street park.

V.F.W. MEMORIAL
Ownership: City
Zoning: GB, URB

A small park located near the center of Florence, this site contains a fountain and a memorial and is lightly used by Florence residents.

EDMOND J. LAMPRON MEMORIAL PARK
Ownership: City
Zoning: URB
Maintenance: DPW

A small ornamental triangle of about one-acre, this site is used for strolling and sitting and is located in front of the Bridge Street School. Benches are located on-site and this is a medium use park.

CITY OF NORTHAMPTON WATERSHED LAND

Properties owned as watershed and aquifer land are protected so long as the water supplies they protect are in public use. If protected water supplies are discontinued, these properties could eventually be sold if there are no other restrictions (in some cases, the Massachusetts Department of Environmental Protection may need to agree that the property is no longer used for water supply protection purposes). Selling any of these properties would require City Council approval, and practically would involve the public through the political process.

CLARK STREET WELL/ AQUIFER AREA - 8.18 Acres
Ownership: City/ Department of Public Works
References: Book 1079, Page 73 (9/27/1950); Book 1110, Page 303 (1/24/1952); Book 1118, Page 275 (5/28/1952)
Acquisition: Purchase

Parcel includes the Clark Street wellhead and much of the Zone I buffer zone. Parcel- owned water supply protection purposes.

ROBERTS RESERVOIR - 57+- Acres
Ownership: City/Department of Public Works

Land includes two "emergency" supply reservoirs (Upper Leeds Reservoir and the Roberts Meadow Reservoir) not on line, and much of the watershed.

SPRING STREET WELL/ AQUIFER AREA - 16 + 8.19 + 7.37 Acres
Ownership: City/ Department of Public Works
References: Book 3667, Page 67 (12/31/1990) (and previous takings and purchases)

Plan Book 40, Page 65; Plan Book 41, Page 55; Plan Book 168, Page 106; disclosure (1991)

Parcels include the Spring Street wellhead and much of the Department of Environmental Protection aquifer Zone I, and a small part of Zone II; Parcels for water supply protection purposes.

RESERVOIR COMPLEX
Ownership: City/Department of Public Works
Location: Various hill towns
Acquisition: Purchase

Parcels include the reservoirs and much of the watershed lands and a site for a future.

OTHER RIGHTS-OF-WAY

Mill River--Bloomberg (Map 31C, Parcel 12) (ROW to Smith College and the public)
Mill River--Futter (Map 31C, Parcel 11/Book 1855, Page 121) (ROW to the public)

NON-PERMANENTLY PROTECTED PRIVATE RECREATION AND CONSERVATION FACILITIES AND LAND

CLEAR FALLS RECREATION CENTER - 73 Acres
Ownership: Private (use by membership only)
Location: Drury Lane
Zoning: RR-Flood Zone

Located in the extreme southwest corner of Northampton, this recreation area offers swimming, picnicking, and nature trails for hiking; a field house, snack bar and picnicking shelters. With a moderate level of use, this area attracts residents from throughout the region. Property is currently (2005) on the market for sale.

DRIVING RANGE
Ownership: Private
Location: Haydenville Road
Zoning: URA

A practice driving range for golf, this facility receives medium summer use by residents throughout the region. Snack bar. Commercial facility, fee required.

HAMPSHIRE YMCA - 4.3 Acres
Ownership: YMCA (Use by membership or fees)
Location: Massasoit St.
Zoning: URA, URB

This facility is utilized on a region-wide basis and offers racquetball, basketball, volleyball, swimming (two pools), sauna & steam room, and a fitness center. It is used heavily year-round.

KEYES FIELD –

Ownership: Florence Savings Bank
Location: Keyes Street at the Northampton Bike Path
References: Declaration of Open Space Restriction, Book 5906, Page 326

Field protected by covenants “as open space with reasonable access to the public for passive use and enjoyment under reasonable conditions.”

NORTHAMPTON COUNTRY CLUB
Ownership: Private
Location: Main Street, Leeds
Zoning: URA

This private golf club offers its members a nine-hole golf course, a swimming pool, and a clubhouse. The establishment receives medium use during the golfing season by residents throughout the region.

NORTHAMPTON REVOLVER CLUB - 34.3 Acres
Ownership: Northampton Revolver Club, Inc.
Location: Ryan Road
Zoning: URA

Offers indoor and outdoor target shooting facilities to members from throughout the region.

OXBOW MARINA - 56.1 Acres
Ownership: Private
Location: Island Road, Conn. River Oxbow
Zoning: SC-Flood Zone

The Marina is a commercial facility offering boat rentals, storage and mooring facilities; tennis, swimming, horseshoes. Utilized on a region wide basis this facility receives heavy summer use. Fees charged. The Marina allows one of Northampton's soccer leagues to use their fields during the summer.

PEOPLES INSTITUTE - 1.5 Acres
Ownership: Peoples Institute
Location: Gothic Street
Zoning: CB

This facility offers arts & crafts classes, educational programs, and summer day camps for elementary age children. The facility includes a dance floor and an outdoor pool. Fees charged.

PINE GROVE GOLF COURSE - 132.3 Acres
Ownership: Private
Location: Old Wilson Road
Zoning: SR

With an 18-hole golf source and field house, this facility is open to members as well as non-members for a fee. Level of use is medium to heavy throughout the golf season, with cross-country skiing in the winter. The facility has a regional user population.

SMITH COLLEGE MILL RIVER, PARADISE POND, ARBORETUM, ATHLETIC FIELDS
Ownership: Smith College
Location: Smith College, Mill River, and West Street
Zoning: URC

This recreational area is part of the Smith College Campus and receives heavy use by both students and area residents (with permission). Facilities include play fields, track & field, tennis courts, rowboats and ice-skating. It includes a very heavily used foot trail from Paradise Pond to northern edge of Smith College, along Mill River. The trail then continues to Ward Avenue and Federal Street.

TRI-COUNTY FAIRGROUNDS - 42 Acres
Ownership: Hampshire, Franklin, And Hampden Agricultural Society
Location: Old Ferry Rd, Fair Rd, and Bridge St.
Zoning: URA, URB, and Watershed Protection

Receives heavy regional use during the fair and racing season, this facility contains an exhibition area, race track (horse), baseball field, play fields, picnic area and a field house.

SCHOOL SITES

LEEDS SCHOOL - 9.3 Acres
Ownership: City
Location: Florence Street, Leeds
Zoning: URA
Management: School Dept - Building use, Recreation Dept - Field use

This 9.3-acre site contains both indoor and outdoor recreational facilities, and is used year-round by the school, the local neighborhood and residents citywide. Outdoors facilities include: playground equipment, a ball diamond, a skating area and a soccer field. Indoors facilities include: a gymnasium with two basketball hoops, two volleyball nets, pull-up bars, plus an auditorium. Parking, bike racks, supervision and first aid facilities are at site. This site is large enough to be redesigned to accommodate other types of field layouts, although some site work would be necessary due to sloping terrain.

ROBERT K. FINN RYAN ROAD SCHOOL - 18.2 Acres
Ownership: City
Location: Ryan Road
Zoning: URA
References: Map ID 29-104
Management: School Dept - Building use
Recreation Dept - Field use

Both indoor and outdoor recreational facilities are available on this 15-acre school site that receives medium-heavy year-round school, neighborhood and citywide use. Outdoors facilities include: playground equipment, five ball diamonds, one soccer field, and a skating area. Rear wooded area could be utilized for some form of outdoor recreation or nature education. Indoors facilities include: a gymnasium, six basketball hoops, four volleyball nets. Locker rooms with shower facilities are available,

as well as bike racks, drinking water and first aid (during school year).

FLORENCE COMMUNITY CENTER (Former FLORENCE GRAMMAR SCHOOL) - 2.5 Acres
Ownership: City
Zoning: URB
Management: School Dept, Leased to Property Committee

This former grammar school (closed 1992) is now a city alternative high school with some of the inside space serving as a community center. Outdoors facilities include limited playground equipment and a blacktop play area.

JFK MIDDLE SCHOOL - 15 Acres
Ownership: City
Zoning: URA
Management: School Dept - Building use
Recreation Dept - Field use

Heavily used primarily by the school, this site contains both indoor and outdoor facilities. Outdoor facilities include: two ball diamonds, three soccer fields and a football field. Indoors facilities include a gymnasium, six basketball hoops, and two volleyball nets, which are used heavily in the winter by school classes and by town residents and special groups. Bike racks, showers, drinking water, supervision and first aid are available at this site. Facilities are generally in good condition; however, recurring problems with neighbors have limited the use of this site.

NORTHAMPTON HIGH SCHOOL - 23 Acres
Ownership: City
Zoning: URB-Flood Zone
Management: School Dept - Building use
Recreation Dept - Field use

This large school site offers both indoor and outdoor recreational facilities and is used heavily by the school (physical education and interscholastic sports), and by residents citywide. Kearney Field site offers outdoor recreational facilities including: playground equipment, two storage buildings, three ball diamonds, a soccer field, a field hockey field, a football field, two grassed gym fields, a track, a lacrosse field, bleachers, and a concession stand. These facilities are used very heavily in the spring, summer, and fall, depending upon the sport season. Indoors facilities used during the school year include: a gymnasium, a universal gym, bleachers, basketball hoops, and an auditorium. Ramps and special toilet facilities are available for the handicapped. A small triangular grassed area located directly across from the High School serves as an informal park, although there are no facilities.

JACKSON STREET SCHOOL - 7.2 Acres
Ownership: City
Zoning: URB
Management: School Dept - Building use
Recreation Dept - Field use

This elementary school site offers both indoor and outdoor recreational facilities that are heavily used by

the school and the neighborhood. Outdoor facilities include extensive playground equipment, two ball diamonds, one soccer/football field, one touch football field, and two basketball courts. The site offers the city's first "adventure playground' (wooden play apparatus) constructed by volunteers. Indoors facilities include: a gymnasium with six basketball hoops, gymnastics equipment, and bleachers for 175 people (year-round). Parking, bike racks, showers, drinking water, supervision and first aid are available at this site. Provisions for the handicapped are also available. Wooded area on site could possible provide outdoor education/nature study activities.

BRIDGE STREET SCHOOL
Ownership: City
Zoning: URC
Management: School Dept.

This elementary school site offers limited outdoor recreational facilities and used heavily throughout the school year by the school and neighborhood residents. Also offers full sized outdoor basketball court (blacktop) and some swings.

NORTHAMPTON COMMUNITY MUSIC CENTER (Formerly SOUTH STREET SCHOOL)
Ownership: City
Zoning: URB
Management: Northampton Community Music Center

A former elementary school now used by the music center for music education. Parcel includes a small tot lot and access from South Street to the adjoining Veterans Field Recreation Area.

SMITH VOCATIONAL SCHOOL (INCLUDES AGRICULTURAL AND RECREATIONAL LAND) - 78.9 Acres
Ownership: City
Zoning: URA
Location: Locust St., South Main St.-Florence, Elm St., and Hospital Rd.
Management: Smith School Trustees- Building use
Recreation Dept- Tennis courts and field use

Used heavily by the school for physical education classes and interscholastic sports, and by residents citywide throughout the school year, this school site with a two-acre athletic field area and indoor facility offers both outdoor and indoor recreational activities. Outdoors facilities include: eight tennis courts and a soccer field. In addition, students are constructing two ball fields as time permits. Indoors facilities include: a gymnasium, a universal gym, and six basketball hoops. There are handicap accessible facilities. There is also a large wetland on the south side of the property. The land immediately west of the developed part of the Smith Vocational School campus is currently used for agriculture (primarily grazing land, with a farm trail constructed in 1993).

FORMER VERNON STREET SCHOOL
Ownership: City
Zoning: URB

This is a former school that includes playground equipment used by the surrounding neighborhoods.

NON-PERMANENTLY PROTECTED PRIVATE FOREST, AGRICULTURAL AND RECREATIONAL LAND - CHAPTER 61 LAWS

The Chapter 61 programs reduce property taxes on private land if the owner commits to keeping the land in forest (Chapter 61), agriculture (Chapter 61A) or recreation (Chapter 61B) uses for a given period of time. Land in Chapter 61 is **not** permanently protected and the owner may remove it from the program at any time. When land is removed from the programs, either to be sold or converted to other uses, the owner must pay a rollback on taxes saved **and** the municipality, or its assignees, has the right to purchase the land at market rates.

There are approximately 585 acres in the forest use chapter (61), 1672 acres in the agriculture use chapter (61A), and 1172 acres in the recreation use chapter (61B).

PRESERVATION AND HISTORICAL RESTRICTIONS

Ownership: City of Northampton
Restriction: Preservation Restriction Agreement
Zoning: Central Business District
Location: Main Street
References: Map ID: Portion of 31D-166. Book 2826, Page 49 (10/10/1986)

HATFIELD STREET SCHOOL
Ownership: Private
Restriction: Preservation Restriction Agreement (City has right to enforce)
Zoning: URB
Location: 52 Hatfield Street
References: Map ID: 18C-140; Book 6843, Page 211 (10/22/02)

THE MANSE
Ownership: Private
Restriction: Preservation Restriction Agreement—(Stewards of the Manse has right to enforce)
Zoning: UR-
Location: 54 Prospect
References: Map ID: _____; Book _____, Page _____ (/ /)

MASONIC STREET FIRE STATION
Ownership: Private (Media Education Foundation)
Restriction: Preservation Restriction Agreement (City has right to enforce)
Zoning: Central Business District
Location: 60 Masonic Street
References: Map ID: 31D-122; Book 276, Page 377 (6/13/2002)

WEST FARMS CHAPEL
Ownership: Private
Restriction: Preservation Restriction Agreement (City has right to enforce)
Zoning: Suburban Residential
Location: West Farms Road

References: Map ID: 35-15; Book 3007, Page 250-252 (6/29/1987)

AFFORDABLE HOUSING RESTRICTIONS AND OPEN SPACE/HOUSING LIMITED DEVELOPMENTS

HABITAT FOR HUMANITY—RYAN ROAD LIMITED PROJECT

units: Two affordable units
Ownership: Private
Restriction Affordability Deed restriction to 5/13/2054
Enforcement: City of Northampton and Habitat for Humanity enforce the deed restriction
Location: 109A and 109B Ryan Road
References: Book 7801, Page 124 and 130 (5/13/2004)—109A Ryan Road
Book 7801, Page 149 and 155 (5/13/2004—109B Ryan Road

City initiated limited development project created two affordable units (built by Habitat for Humanity) and 80 acres of open space, now part of Saw Mill Hills Conservation Area).

HABITAT FOR HUMANITY—WESTHAMPTON ROAD LIMITED PROJECT

of units: Six affordable units (one market rate single family lot sold by City)
Ownership: Private
Restriction Affordability Deed restriction (homes under construction, restriction not yet closed)
Enforcement: City of Northampton and Habitat for Humanity enforce the deed restriction
Location: Westhampton Road
References: Taking and Confirmatory Deed to City Book 6137, Page 317 and 327
Deed, Book 7347, Page 320 and Corrective Deed Book 8118, Page 172 (12/29/2004)
Westhampton Road
Plan Book 195, Page 98

City initiated limited development project creating six affordable units (built by Habitat for Humanity), one market rate lot sold to defray project costs, a landfill buffer, a future market rate building lot site, and 16 acres of open space, now part of West Farms Conservation Area).

HABITAT FOR HUMANITY—GARFIELD AVENUE LIMITED PROJECT

of units: Six affordable units (one market rate single family lot sold by City)
Ownership: Private
Restriction Affordability Deed restriction (homes under construction, restriction not yet closed)
Enforcement: City of Northampton and Habitat for Humanity enforce the deed restriction
Location: Westhampton Road

City initiated limited development project creating six affordable units (built by Habitat for Humanity), one market rate lot sold to defray project expenses, and a small Florence Conservation Area, which includes a former landfill under permanent activity and use limitations (AUL).

PARADISE POND APARTMENTS

of units: Transitional affordable unit
Ownership: HAP, Inc.
Restriction Affordability Deed restriction
References: Access easement from Smith College

Enforcement: City of Northampton and DHCD
Location: West Street

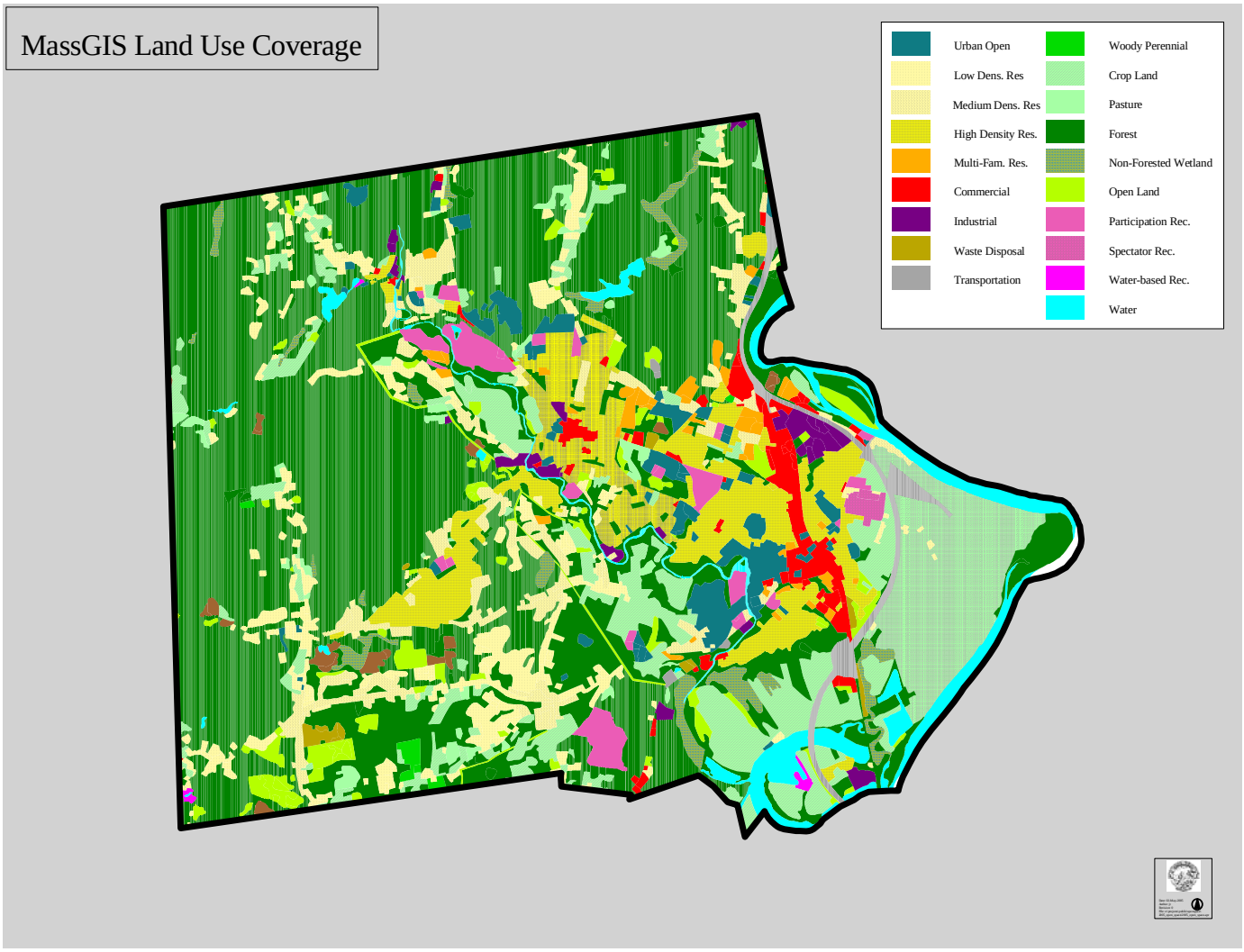
DEVELOPMENT AGREEMENTS

200-206 KING STREET
Ownership: Private
Restriction Permanent Development Agreement
Enforcement: City of Northampton
Location: 200-206 King Street
References: Book 7982, Page 197 (9/9/2004)
Zoning: Highway Business (HB)

Property owner agrees to limit uses to prevent those incompatible with a residential neighborhood, agrees that new buildings will be a minimum of two stories, and that upper floors will only be used for housing for so long as the City maintains the property as GB or HB.

NORTH KING STREET
Ownership: Private
Restriction: Permanent Development Agreement
Enforcement: City of Northampton
Location: North King Street
References: Deed Book 1337, Page 407, Development Agreement Book, 8180 Page 119(03/04/2005)
Zoning: Highway Business (HB)

Property owner agrees to fund $150,000 to allow the City to make certain transportation improvements if the City rezones the property to HB (City rezoned the property in March 2005)


MassGIS Land Use Coverage
Urban Open
Low Dens. Res
Medium Dens. Res
High Density Res.
Multi-Fam. Res.
Commercial
Industrial
Waste Disposal
Transportation
Woody Perennial
Crop Land
Pasture
Forest
Non-Forested Wetland
Open Land
Participation Rec.
Spectator Rec.
Water-based Rec.
Water

SECTION 6
COMMUNITY VISION

DESCRIPTION OF PROCESS

This plan builds on six earlier *Open Space, Conservation, and Recreation Plans* (1975, 1980, 1985, 1989, 1994, and 2000) and on other planning, conservation and recreation documents, including *Northampton 2020 Vision* (1999). This plan was written under the direction of the Conservation Commission, Recreation Commission, and Planning Board, with participation from an ad-hoc Open Space and Recreation Plan Committee.

To ensure that this Open Space and Recreation Plan truly reflects the current needs, desires and opinions of the citizens' of Northampton, the Planning Board, Conservation Commission and Recreation Commission sought input from the public and from various municipal boards during two public hearings. The findings were consistent with the findings from a much more extensive 2000 outreach and participation conducted as part of the citywide *Northampton 2020 Vision*. The Conservation Commission, Recreation Commission, and Planning Board reviewed and approved the final document and submitted it to City Council.

STATEMENT OF OPEN SPACE AND RECREATION GOALS

Northampton is endowed with a diverse natural and cultural environment, which provides scenic vistas, opportunity for passive and active recreation, and a wide variety of plant and animal habitats, including habitats for rare and endangered species. Northampton residents want to preserve and enhance these resources, but also acknowledge that the open space and recreation goals are sometimes in conflict with other community goals.

Major open space and recreation goals are to:

- Preserve and expand city holdings of open space, wild lands and small pieces of open land in developed areas.
- Use open space and recreation to ensure that the urban and village centers are attractive places to live, work and visit.
- Determine the need for and possibly provide additional sites for community gardens.
- Where consistent with protection of wildlife and plant habitat, make more natural areas available for public use.
- Provide recreation opportunities for individuals of all ages and physical abilities now and for future generations.
- Preserve the character and integrity of rural areas, farms, forests, and rivers.
- Maintain and restore healthy and sustainable natural ecosystems with diverse populations of indigenous flora and fauna.
- Develop partnerships with neighborhood groups and organizations to help maintain, protect and expand the existing open space and recreation areas.

SECTION 7
ANALYSIS OF NEEDS

SUMMARY OPEN SPACE AND CONSERVATION NEEDS-CITY OF NORTHAMPTON

The City has been acquiring and permanently protecting approximately 100 acres of open space, in fee or by easement, annually for the past decade. Still, as Northampton has developed in recent years, residents have recognized that the existing open space is being lost and that permanent protection of open space and recreation lands is needed more than ever.

During numerous public meetings and hearings and meetings with city boards and officials, the Planning Board, Conservation Commission, and Recreation Commission have consistently heard concerns that important open space and recreation needs are not being met.

The Conservation Commission and Planning Board, working through the public planning process, have identified the following, as Northampton's most pressing open space needs:

1. Passive recreation opportunities throughout the city.
2. Linkage and augmentation of open space parcels, to provide for passive recreation and wildlife movement between large natural habitat areas.
3. Protection of vistas and "viewsheds".
4. Acquisition for permanent protection of a range of critical and natural plant and animal habitats, including:
   -Wetlands
   -Rare or endangered species habitat
   -Riparian lands along the Connecticut, Mill, and Manhan and other rivers and major streams.
5. Preservation of open space parcels that help define Northampton's character, including parcels at the "entrances" to the city and parcels that limit the expansion of development into previously rural areas.
6. Protection of farmland, forestland and the rural character of outlying areas.
7. Protection of Northampton's drinking water supply watershed and aquifer lands and of Hatfield's aquifer.
8. Encouraging or requiring that development be sensitive to ecological resources, vistas, and open space.
9. Limited improvements, including improvements to make some conservation areas handicap accessible.
10. Fishing and informal swimming opportunities in conservation areas and throughout the city.
11. Permanent protection of Smith Vocational agricultural and forestry lands and of undeveloped lands at the Veterans Administration Hospital and the County Long Term Care Facility.
12. Protection of key parcels in the last remaining large undeveloped areas of town – Broad Brook Watershed, Marble Brook Watershed, Saw Mill Hills, Mineral Hills, and the Meadows.

The Recreation Commission and Planning Board, working through the public planning process, have identified the following as the most critical recreation and park needs:

1. To the extent resources allow, improvement of recreation area facilities and provision of access for residents with disabilities, especially rest rooms, at existing recreation areas.
2. A wider diversity of recreation facilities, especially indoor facilities.
3. Better maintenance of recreational areas.
4. More bike paths, bike lanes, bike routes and bike linkages.
5. Permanent protection for current and future recreation and park areas.
6. Provide additional recreation opportunities wherever possible.

SUMMARY OF OPEN SPACE AND CONSERVATION NEEDS- THE 2000 STATEWIDE COMPREHENSIVE OUTDOOR RECREATION PLAN (SCORP)

The Massachusetts Executive Office of Environmental Affairs Department of Conservation Services publishes the *Statewide Comprehensive Outdoor Recreation Plan (SCORP)* to provide cities and towns in Massachusetts with information for local and regional planners to use as a tool in targeting areas of critical need for recreation, whether in acquisitions, facility improvements, or programming changes. The Department of Conservation Services Needs Assessments are created by evaluating the available supply of recreational facilities along with the current and future demand. The regional analyses create profiles of needs, which communities are required to consider when applying for grants under the Land and Water Conservation Fund and state Self-Help and Urban Self-Help programs. Regional profiles of needs are useful as indicators, not as specific and absolute predictors. The intent in developing the needs analysis is to provide information on demand, both met and unmet, and supply that will point out areas of need that should be considered in planning and grant applications. The intent was not to create a set of imperatives or a specific local plan that communities could follow, but rather to supply communities with statewide and regional data that should be considered and perhaps modified by particular local needs.

STATEWIDE UNMET NEED FOR RECREATIONAL FACILITIES

Overall, statewide need is greatest for trail-based activities, with walking and road biking indicated as the individual activities with the highest demand. Field-based activities rank second as priority needs for new facilities, with playground activity, tennis, and golfing ranked at the top of the activity need list. Finally, a strong need exists for water-based activities, with swimming indicated as the facility most needed statewide. In simple rank order, the ten most needed or desired facilities mentioned by respondents are:

Desired Facility Percent of Respondents Using the Facility

1. Swimming 14.8%
2. Walking 13.8%
3. Road Biking 12.9%
4. Playground Activity 9.9%
5. Tennis 8.0%
6. Golfing 7.9%
7. Hiking 7.1%
8. Mountain Biking 6.7%

Regional Needs Patterns

Regionally, facility needs are similar to statewide needs, with trail-based activities at the top of all regional lists. Field-based and water-based activities follow in need and are too close to accurately rank.

However, there are notable differences among regions and between regions and statewide results. Most regional results show a clear relationship between the facilities available in an area and the facilities respondents would most like to see more of (that is, those in greatest supply are in least demand and those in least supply are in greatest demand). Land managers must carefully consider these needs, and thoroughly evaluate if existing facilities can support this demand before committing to new facilities. Programmatic changes may fulfill some portion of the expressed need.

A distinctive pattern emerges in the Connecticut Valley Region, including the hilltowns of Hampshire, Hampden and Franklin Counties. Hiking (10.7%) and playground activity (11.3%) ranked high with swimming and road biking, but also hiking, mountain biking (10.3%), and cross country skiing (4.1%) are ranked higher than in any other region.

DEPARTMENTAL NEEDS FOR RECREATION IN THE CITY OF NORTHAMPTON

With limited resources, maintenance of existing municipal facilities is one of the most difficult tasks facing the City of Northampton. As resources grow scarcer, recreation maintenance funds have become more limited, and different municipal needs have often conflicted with each other. Unfortunately, most actions that address recreation and park area management needs require scarce resources:

1. To the extent resources allow, the city should continue to work to provide better maintenance and staff support for the Recreation Department.
2. The city should consolidate the ownership of all recreation areas with the Recreation Department.
3. The city should continue to work with Look Park and cooperate with their efforts to meet Northampton's recreation needs.
4. The city should continue to cooperate with non-municipal recreation providers to coordinate on recreation facilities.

DEPARTMENTAL NEEDS FOR CONSERVATION IN THE CITY OF NORTHAMPTON

Limited municipal resources also restrict the public's use of conservation areas, even though conservation areas require far less maintenance than recreation areas. Improving management of conservation properties is only possible if scarce municipal resources are provided:

1. To the extent resources allow, improved funding for other than ordinary maintenance of conservation areas.
2. To the extent resource allow, improved staffing to allow a summer staff for needed maintenance and improvements.
4. To the extent resources allow, continued cooperation with other government agencies, conservation agencies, and neighborhood groups that manage conservation land.

RESOURCE PROTECTION NEEDS IN THE CITY OF NORTHAMPTON

Although Northampton's resources are less threatened than many urban communities, there are significant threats to natural resources, plant and animal habitat, and the general environmental health of the City. Through the open space and recreation planning process, we have identified the following as critical natural resource protection needs:

1. Permanent protection of large open space parcels, or linkage of open space parcels, to provide large natural habitat areas.
2. Permanent protection of critical and highly-productive habitat, including:
   -Wetlands
   -Rare or endangered species habitat
   -Wildlife corridors
   -Riparian corridors
3. Permanent protection of a range of natural habitat types, including:
   -Riparian (riverfront) habitat
   -Farmland and forest
   -Perennial and vernal pools
4. Permanent protection of Northampton's drinking water supply watershed and aquifer lands and of Hatfield's aquifer.
5. Limiting development that could be damaging to environmental resources, including:
   -Floodplains
   -Wetlands and buffer areas
   -All water courses and bodies
   -Prime and active agricultural land
   -Sensitive natural areas
   -Wildlife habitat and corridors
6. Ensuring protection of resources that cross political boundaries by working with neighboring communities, governments, state and regional agencies and nonprofit organizations.

SECTION 8
GOALS AND OBJECTIVES

The following are policies, objectives, and actions that were adopted by the Northampton Planning Board in the Vision and Consistency Analysis of the Vision 2020 Comprehensive Plan, adopted in 1999. All of these goals have some impact on open-space and recreation. Some have more impact than others, and they are all repeated here for the sake of completion. Listed in no particular order:

GOAL 1: EXPAND OPEN SPACE AND RECREATION

- Preserve and expand city holdings of open space, wild lands, and small pieces of open land in developed areas.
- Use open space and recreation to ensure that the urban and village centers are attractive places to live, work, and visit.
- Make more natural areas available for public use.
- Provide recreation opportunities for individuals of all ages and physical abilities now and for future generations.
- Preserve the character of rural areas, farms, forests, and rivers.

Policies and objectives to meet goals	**Partial list of actions for goals and objectives** ☐ To be done ☑ Partially completed, but can use improvement**.**
Ensure that all appropriate recreation areas are accessible to those with physical disabilities.	☑ Complete handicap accessibility improvements at all feasible recreation areas.
Upgrade all parks in urban and developed areas.	☑ Add and maintain downtown and Florence pocket parks, green ways, rail trail (bike path) linkages and Mill River access.
Increase the number of ball fields by at least 10 to serve burgeoning recreation needs.	☑ Acquire land for ball fields at Northampton State Hospital and in western section of city.
Link all the city's conservation districts to each other with greenways so that hikers and walkers can traverse the city. Create a citywide trail system that is marked.	☐ Explore possibility of getting easements from private landowners, so hikers can cross to public lands.
Add to the city's conservation land holdings by acquiring small green areas downtown and in villages of Bay State, Leeds and Florence.	☑ Conservation Commission must make it a priority.
Provide recreation, conservation, and open space opportunities.	☑ Acquire parcels that are accessible to residents. ☑ Acquire parcels that help define neighborhoods and the community. ☑ Acquire restrictions to preserve farms, forests and rivers, and other resources. ☑ Acquire parcels for new recreation opportunities.
Acquire land with vistas and interesting landscapes, especially in western edge of city.	☑ Conservation Commission charge.

Make sure that no city farm goes out of business. Farmland should not be lost to housing.	☐ Link city farmers with conservation groups and state agricultural protection restriction program. ☐ Foster the current Northampton farmers' market.
Acquire land that serves as a gateway between urban, suburban, or rural landscapes.	☑ Conservation Commission charge.

Significant inconsistencies between vision and current practices:

1) New development is not contributing to the preservation of open space and is converting open space to housing much faster than open space is being preserved.
2) Municipal spending has not been allocated for open space acquisition.

GOAL 2: PRESERVE TRADITIONAL LAND USE PATTERNS WITHOUT CREATING SPRAWL

- Redevelop vacant land in built-up areas, guarding against sprawl.
- Promote new villages (commercial, residential areas) where feasible.
- Foster continued mixture of uses in villages: Florence, Leeds, and Bay State.
- Discourage development damaging village character of urban/residential neighborhoods.
- Ensure new downtown development meshes with architectural heritage.
- Maintain clear distinction between rural, suburban, and urban areas.
- Promote traditional neighborhood development patterns.
- Encourage and create incentives to develop in urban centers and zones identified for growth pursuant to the Sustainability Plan comprehensive planning process.

Policies and objectives to meet goals	**Partial list of actions for goals and objectives** ☐ To be done ☑ Partially completed, but can use improvement.
New development should be accompanied by open space preservation so that at least one acre of open space is preserved for each acre of land developed.	☑ Acquire open space for conservation and recreation purposes. ☑ Use zoning to ensure open space preservation.
Suburban style development should be matched by an equal or greater amount of compact development.	☑ Amend zoning and subdivision regulations. ☐ Add adequate facilities/concurrency ordinance with no development until city services/water and sewer can accommodate it. ☐ Adopt a best practices design manual.
Ensure that new housing development will not outstrip school, public works, public safety services, and ability of downtown roads to handle suburban traffic.	☐ Consider phased development ordinance. ☐ Add adequate facilities/concurrency ordinance. ☐ Consider impact fees or exactions where development pays for its own services. ☐ Consider community preservation act, taxing real estate sales.
Undertake city-wide sustainability-focused comprehensive plan 2005-2006	☑ Revise regulatory structure to move toward City land use plan.
Create land zoned for new economic development opportunities where it will not harm neighborhoods.	☐ Rezone to create new industrial and commercial areas (see land use map).

Encourage development patterns that contribute to, and do not sap, the strength of their neighborhoods.	☐	Amend zoning rules to encourage new development to be linked with existing neighborhoods.
Make sure that all existing buildings are reused and rehabilitated.	☑	Some zoning has been changed to allow for easier reuse of old mill buildings.
Cluster all housing developments in rural areas, leaving more open land, with designs that still allow for housing choices.	☑ ☐	Current zoning allows some advantages for developers who cluster houses. Revise subdivision rules and regulations
While showing a preference to village-type growth, do not preclude homeowners from choosing large lots in suburban areas.	☑	Current zoning allows for large lots in outlying areas.
Make certain the community groups have role in city planning.	☐	Inform neighborhood groups of planning issues as individual abutters are now notified.
Prevent any significant development from sensitive floodplain areas.	☐	Revise Special Conservancy zoning and Water Protection zoning to prevent development in floodplain areas.
Define that portion of Rural Residential zoning that should be rural and preserve the character of that area.	☐	Adopt zoning that preserves farms and forests, instead of simply calling for larger suburban lots and labeling it rural.
Reduce traffic impacts from new residential development and sprawl	☐	Evaluate impacts from current residential development patterns, especially development in the Ward 6/Route 66 sections of the city.
Address anomalies and inconsistent messages sent in the zoning. Especially coordinate city zoning at town boundaries with that of surrounding towns.	☐ ☐ ☐	Rezone parcels on Hatfield town line or near town line that abuts commercial or industrial areas in Hatfield to match Hatfield zoning. Work with adjoining towns for coordinated zoning. Examine pre-existing non-conforming commercial and industrial areas and consider if some of these should be rezoned commercial or industrial.

Significant inconsistencies between vision of traditional development patterns without sprawl and current practices:

1) Land use guidance regulations allow but do not particularly encourage development patterns consistent with this vision.
2) There is not adequate control to ensure that new development only takes place when adequate facilities are in place neither to support that development nor to phase development to minimize adverse impacts.
3) Rural residential zoning does not preserve rural character of the city and special conservancy may not be much more effective at preserving floodplains.

GOAL 3: PRESERVE NATURAL AND CULTURAL RESOURCES AND THE ENVIRONMENT

- Protect important ecological resources, including surface and groundwater resources, plant

communities, and wildlife habitat.

- City should take lead in protecting architectural and cultural history.
- Preserve ecological and wildlife linkages, especially water-based linkages.

Policies and objectives to meet goals	**Partial list of actions for goals and objectives** ☐ To be done ☑ Partially completed, but can use improvement**.**
Improve quality of storm water discharges.	☐ Focus on low maintenance solutions such as stream daylighting and artificial wetland creation. ☐ Use regulations to reduce non-point source pollution.
Discourage development in environmentally sensitive areas and encourage environmentally sound development.	☑ Zoning and city infrastructure extension policies. ☑ Zoning, subdivision regulations, city investment, grant investment. ☐ Review zoning restrictions that undermine energy efficient building.
Protect valuable ecological resources.	☑ Acquire, in fee and by restriction, valuable ecological and open space linkages
Reuse brownfields sites.	☐ Use property tax and TIFs to encourage reuse of brownfields and previously developed properties.
Provide performance standards to preserve the environment.	☑ Improve performance standards in zoning.
Preserve cultural and architectural history.	☐ Historical Commission should complete an inventory of historic properties. ☐ Inventory of historic properties should be available for review on the Internet and at local libraries. ☐ Historical Commission should begin acquiring historic preservation restrictions on key buildings. ☐ Historical Commission should examine new proposals for local historic districts and demolition delay ordinances. ☐ The city should consider tax incentives to encourage historic preservation.
New acquisitions to city vehicle fleet should include alternative fuel vehicles, such as those run by natural gas, fuel cells, or electricity.	☐ Energy Resources Commission/Central Services should work with School Department and DPW to implement.
Provide for quality street trees and streetscape.	☐ Consider how to expand street tree program.
Provide parking spaces and refueling places for electric vehicles.	☐ Energy Resources Commission should work with the Parking Commission to implement.

Reduce city dependence on disposable items.	☐ City should purchase products from companies that promote recycling and waste reduction.

Significant inconsistencies between vision of preserving natural and cultural resources and current practices:

1) City storm water discharges need to be rebuilt throughout the city and improved water quality practices need to applied to those systems

SECTION 9
FIVE-YEAR ACTION PLAN

The Planning Board, Conservation Commission, and Recreation Commission identified the following actions to achieve the objectives and address the goals and needs outlined in this plan. The boards have included actions that they would like to see done within the next five years, even though many of these actions will not realistically be completed because of the availability of funding and other resources.

It is the city's goal to comply with Title IX (equal opportunity for recreation) and American Disabilities Act and Section 504 (accessibility for people with disabilities)

Table 9-1: Recommended Action Steps to Implement the Northampton Open Space and Recreation Plan

OBJECTIVE	ACTIONS	RESPONSIBLE BOARD/GROUP
Provide linkages or greenways between protected areas and along wildlife corridors.	Engage in proactive planning and land acquisition. Continue to encourage CRs, Easements, and acquisition of linkages from developers at the time of subdivision.	Planning Director Conservation Planner Conservation Commission
Protect vistas and scenic viewsheds, including hilltops and ridgelines, views from roads, conservation areas, and nearby State Parks.	The city should consider revisions to its open space residential development zoning and consider adopting a ridge top protection zoning ordinance to ensure that development does not damage sensitive scenic resources.	Conservation Planner Planning Director Planning Board
Protect farmland.	Assist in formation of Agricultural Commission Acquire land in Meadows area of Northampton	Conservation Commission Conservation Planner
Obtain CRs or APRs for important parcels not currently in permanent protection.	Conservation or agricultural restrictions should be used to provide permanent protection for the agricultural lands at Smith Vocational Agricultural School and the forestry lands used by the school on the old Veterans Administration parcel. Conservation Restrictions could be placed on the Department of Public Works water supply lands if financial incentives are offered by the Commonwealth of Massachusetts.	Planning Director Conservation Planner
Maintain ecological inventory data about conservation parcels and the City in general.	Continue collecting ecological inventory data as an update to Laurie Sanders' inventory information and the work of the Conservation Commission's wildlife committee. Collect base line data on new conservation parcels as they are acquired, update old data every 10-15 years, and continue vernal pool mapping program. A stronger focus on ecological resources that cross municipal boundaries is needed.	Conservation Commission Wildlife Committee Conservation Planner
Improve and revisit long-range	Build and increase acquisition and maintenance	Recreation Commission

OBJECTIVE	ACTIONS	RESPONSIBLE BOARD/GROUP
funding strategies for property acquisition and maintenance.	endowments through collaborative efforts.	Conservation Commission Planning Director Local Partner Organizations and Conservation Area Management Citizen Groups
Protect community health and character by preserving small recreation locations important to Northampton's neighborhoods.	Work with neighborhoods to identify key parcels which might not have city-wide recreation or conservation significance, and therefore are not identified in this plan, but which are a special place or a local treasure for that neighborhood and demanding of special attention.	Conservation Commission Conservation Area Citizen Volunteer Groups
Employ a variety of land protection techniques to maximize pro-active land preservation in the city.	Continue use of limited development and other means, in cooperation with landowners and developers, to preserve large parcels of land that the city does not otherwise have the resources to preserve.	Planning Director Conservation Planner
Participate in regional coordination of open space protection.	Conservation Commission should meet with Conservation Commissions and Open Space Committees in neighboring towns to discuss possible joint projects.	Conservation Commission Conservation Planner
As part of a future Manhan rail trail linkage, build a bridge connecting the State Hospital parcel off Federal Street with the bulk of the State Hospital property.	Acquire needed approvals and permits locally, from DAR, the Commonwealth of Massachusetts and possible legislative approval. Continue neighborhood outreach. First neighborhood meeting was held in 1996. Update bridge costs and design. Preliminary plans for the bridge completed in 1996 by Tighe & Bond; estimated 1996 cost $200,000. Design for a bridge that spans the annual flood zone and ensures that the bridge could withstand any floodwater it might encounter.	Planning Director
State Hospital Area	Acquire agricultural preservation restriction on the Gateway Vistas and Hayfields parcel at the Northampton State Hospital (parcel D), with the land to be owned by the Department of Agricultural Resources. (See the Planning Board's 1993 Northampton State Hospital Plan.) (1994 legislation authorizes. Cons. Com. voted 9/12/94 to accept.) Transfer expected in late 2005.	Planning Director Conservation Planner
Fitzgerald Lake Conservation Area	Acquire land between Fitzgerald Lake Conservation Area and both Mary Jane Lane and Cooke Avenue; Acquire woodland and wetlands abutting Pines Edge section of the Fitzgerald Lake Conservation	Planning Director Conservation Planner Conservation Commission

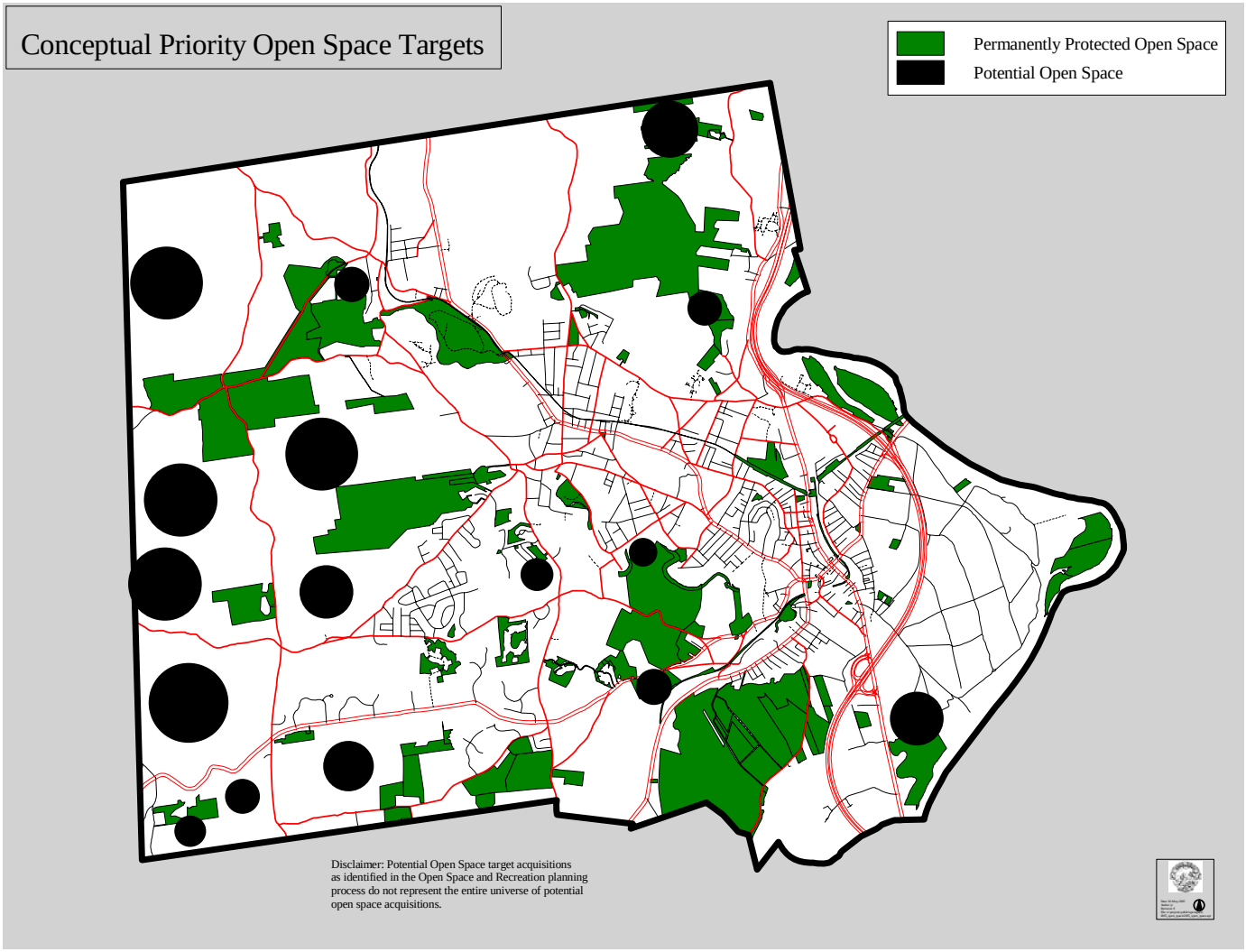
OBJECTIVE	ACTIONS	RESPONSIBLE BOARD/GROUP
	Area, on its north side. (USFS purchase of conservation restrictions from Anciporch protects a parcel. The Conservation Commission is still interested in acquiring remainder interest or trail right-of-way.)	
Mill River Corridor	Acquire conservation land in the floodplain area between the Yankee Hill Conservation Area, the Northampton State Hospital Agricultural land APR and the Mill River.	Planning Director Conservation Planner
Saw Mill Hills Conservation Area	Preserve an eventual 500+ acre conservation area covering much of the ridgeline, highly productive small wetlands and vernal pools in the Saw Mill Hills and land for a trail system through the Saw Mill Hills. (24-acre parcel donated by Towne in 1995 and a 28-acre parcel donated by Jonathon Wright in 2000).	Planning Director Conservation Planner Conservation Commission
Northampton Business Park	Preserve open space related to the proposed Northampton Business Park (fifty percent of the site as required under current zoning) due to its rich wetlands and its use as a wildlife corridor between Massachusetts Audubon's Arcadia Wildlife Sanctuary and the farmland at the Northampton State Hospital.	Mayor City Council Economic Development Coordinator
Mineral Hills Conservation Area	Create an eventual 500 + acre Mineral Hills conservation area in Northampton and Westhampton including a trail system through Mineral Hills connecting Northampton with Westhampton. (The current 87-acre Mineral Hills Conservation Area provides a trailhead and the beginning of a trail system.)	Planning Director Conservation Commission Town of Westhampton
Marble Brook Corridor	Preserve a wide buffer of land along Marble Brook, in Leeds.	Planning Director Department of Public Works
Flood Plain Areas	Preserve parcels along the historic Mill River, the Connecticut River, the Oxbow, and the current and historic confluences, especially highly productive wetlands and floodplains.	Planning Board Conservation Commission
Broad Brook	Preserve uplands and wetlands north and east of Fitzgerald Lake Conservation Area along Broad Brook.	Planning Director Conservation Planner Conservation Commission
Roberts Hill Conservation Area	Preserve the unused power line right-of-way at Roberts Hill Conservation Area should from Mass. Electric Company. Wooded land abutting Roberts Hill Conservation Area on its north side.	Planning Director Conservation Planner
West Farms Conservation Area Park Hill Road	Facilitate development of conservation areas, conservation restrictions, and agricultural	Planning Director Conservation Planner

OBJECTIVE	ACTIONS	RESPONSIBLE BOARD/GROUP
	preservation restrictions in the meadows and in the Park Hill section of Northampton. This area contains some of the best non-floodplain farmland in Northampton and wonderful vistas. Much of it has already been preserved, but there are critical gaps, especially the gap between existing Park Hill Road APR and CR land and the existing West Farms Conservation Area on Route 66. Purchase land for an open space corridor from the West Farms Conservation Area to the existing Park Hill Road Conservation Restriction and Agriculture Preservation Restriction Cluster.	Conservation Commission
Route 66, Glendale Road and Loudville Road.	Acquire conservation land in the area bounded by Rte. 66, Glendale Rd, and Loudville Rd.	Planning Director Conservation Planner Conservation Commission
Rail Trail Areas	Protect the viewshed along rail-trails and proposed rail trail and bike paths to ensure that rural or otherwise attractive areas remain attractive to users.	Planning Board
Turkey Hill	Preserve land in the Turkey Hill section of the City (between Route 66 and Turkey Hill Road) that can eventually link to the Mineral Hills Conservation Area	Planning Director Conservation Planner Conservation Commission
Provide recreation opportunities in new locations	Encourage developers to provide for recreation needs in new cluster subdivisions, planned unit developments, and business parks.	Recreation Commission Planning Board Senior Planner
Provide high quality passive recreation opportunities, especially in areas not otherwise served	Acquire a parcel of land for a future recreation area on a site with relatively low development costs. Ideally a new site should be in an area not already well served by recreation areas, such as the southwest quarter of town.	Recreation Commission Conservation Commission
Plan for expansion of current recreation areas	Acquire the western portion of the city's surplus Oak Street property, to create a buffer along the bike path and serve other future recreation needs. Acquire undeveloped land abutting Sheldon Field to allow for additional recreation opportunities.	Recreation Commission
Improve accessibility to Maines Field	Improvements should include those described in this plan, the 504 Handicap Accessibility Self-Evaluation, and the Americans with Disabilities Act Transition Plan.	Recreation Commission and Department of Public Works
Redesign and improve Veterans Field	Project is ongoing and should be completed.	Recreation Commission
Improve safety in key spots along existing rail trails.	Work with the Department of Conservation and Recreation to insure that the Norwottuck Rail Trail is eventually placed in a tunnel or bridge where it crosses Damon Road.	Planning Director

OBJECTIVE	ACTIONS	RESPONSIBLE BOARD/GROUP
Provide for co-existence of beavers	Work with the Department of Environmental Protection and the Division of Fisheries and Wildlife to restore wetlands and to implement best management practices.	Conservation Planner

Capital Expenditures Completed in past decade:

1. Rehabilitation of the Fitzgerald Lake dam. Fitzgerald Lake is among Northampton's most important ecological and passive recreation resources.
2. New roadside parking lot at Fitzgerald Lake parking lot and closing of old lot 1/10th mile from the road.
3. Major improvements for Arcanum Field - improve accessibility and rehabilitate the recreation area.
4. Significant rehabilitation of Howard's Ice Pond dam.
5. Sheldon Field parking lot (dual recreation and park-and-ride use) and basketball courts.
6. EXPECTED 2005—Veterans Field reconstruction.
7. Bicycle trail extension at State Street and through Stop-and-Shop to King Street
8. EXPECTED 2005—Manhan Rail Trail from downtown to former Northampton State Hospital
9. 2004 and 2005—Manhan Rail Trail Spur from Route 66 at Ice Pond Drive to Florence Road.



MANAGEMENT PLAN--CONSERVATION AREAS

All conservation areas should be managed to protect the parcels in their natural state. Management actions are limited to those that restore parcels to their natural state, improve wildlife habitat, or provide for generally non-consumptive enjoyment of conservation areas.

Conservation Commission properties, easements and restrictions should be inspected at least yearly:

1. All property lines should be walked and inspected for encroachment and violations of the restrictions.
2. All trails inspected for trail maintenance needs and marked as needed.
3. All trash should be cleaned up.
4. All wooden and metal signs should be inspected and repaired or replaced as needed.
5. The Commission should avoid the burden of making brochures for each conservation area, and instead maintain all necessary information on the city's web site. A single map should be produced,

containing pertinent information about all the conservation areas. If a volunteer group would like to create a brochure on their own the Commission should review it for accuracy, and if appropriate, endorse the brochure.

6. The Commission should continually update its ecological assessments of conservation areas and other properties of high conservation value. Properties should be evaluated for potential habitat improvement or restoration and vernal pools should be identified and State certified.
7. Signs with conservation area rules should be posted around the edge of properties.
8. Access should be improved to conservation areas whenever possible, especially at Roberts Hill and Mineral Hills conservation areas.

In addition, some conservation areas are in need of other improvements, land acquisitions, or on-going maintenance. Recommendations within each subcategory are given in order of priority in the following section.

AQUIFER AREA: BROOKWOOD MARSH

Improvements:

1. The Commission should continue the beaver dam maintenance agreement on an annual basis to prevent failure of the culverts placed in the beaver dam.

Acquisition: The Commission should attempt to acquire the remainder of the wetlands immediately south of the Conservation Area as one of the Commission's top priorities for land acquisition. See Rediscovering Northampton. (Partially done 1994).

Completed Items

Beaver dams removed: Fall, 1990

Culvert in dam to lower water level: July, 1992

In 2001, the Commission completed its plans to restore previously filled wetlands with financial help from the U.S. Fish and Wildlife Service (F&WS), the Department of Environmental Protection (DEP), and the Natural Resources Conservation Services. The 1998 GROWetlands Grant Program out of the Executive Office of Environmental Affairs funded the restoration of these wetlands. The restoration involved the removal of fill material and the relocation of a controversial beaver dam further away from the surrounding residential homes. The cost to the city was in-kind contributions (Office of Planning and Development, Smith Vocational School Forestry Department, and assistance from local volunteer groups).

Because the invasive non-native plant Purple loosestrife has been out-competing native plants of much higher wildlife value, the Commission applied for and received a WHIP Grant in 2004 from the Natural Resources Conservation Service to implement a biological invasive control program for the eradication of the invasive. The Conservation Commission purchased 16,000 Galerucella beetles and released in the northern section of the marsh in June 2005. If successful, this type of biological control can be a highly cost effective, long term, nonpolluting, and a self-sustaining solution to the Purple loosestrife invasion. Furthermore, the wetland marsh has benefited from the native biota replaced from the work completed from the GROWetlands Grant Program, is persistent and self-sustaining. The Conservation Commission will monitor the site over the next five years.

AQUIFER PROTECTION AREA: INDIAN HILL

Improvements:

Install an "Aquifer Area, Indian Hill" sign at the Indian Hill cul-de-sac.

BARRETT STREET MARSH

Improvements:

1. The Conservation Commission shall continue to work jointly with the Department of Public Works regarding the review and implementation of the hydrology report prepared by Baystate Environmental Consultants ("The Functional Analysis of the Hydrology and Hydraulics of Barrett Street Marsh, April 2000).

Acquisition: Future acquisition of the woodland west of the conservation area, off of Jackson Street.

Maintenance:

1. Two coats of environmentally sensitive preservative (two to three gallons/coat) should be added to all of the boardwalk decking and to cracked support beams annually.

Completed items

Wheelchair accessible walkway built: 1992
PTO/Jackson Street School cleanups: November 1990; May 1992; May 1993
Preservative added and boardwalk repairs: 1992-2005(two coats)
39 tons (approximately 12 yards) of trap rock gravel purchased May, 1993. One half spread in May onto the wheelchair accessible path by Smith Vocational School and the remainder to be spread in the fall.

FITZGERALD LAKE CONSERVATION AREA

Asphalt and boardwalk wheelchair accessible path to Fitzgerald Lake installed: Summer 1993.
BBC cut some of vegetation on dam: Fall 1989, Fall 1990, Fall 1991; Summer 1992; Summer 1993; Fall 1993. Yearly by contract 1994-2004. Yearly by BBC 2005-
Total Dam Restoration 1998
Property lines inspected, blazed as possible: Fall 1991
Parking lot and access road regraded (some new gravel & TRG): Spring 1992 (Smith Vocational), Fall 1993 (contractor)
Brush cut along access road: September 1993
Rocks placed along end of road to close old logging road: Spring 1992
Hiking trails blazed: Spring 2005
New color map/brochure developed: 2002, updated 2005
Wildlife blind constructed on marsh off of Marian Street Trail: 2000
Pilot Planting of shrub "island" in Cooke's Pasture: 2005
"Beaver Deceiver" installed at Fitzgerald Lake outflow pipe: 2005
Donation cylinders (aka "Iron Rangers") constructed for placement at North Farms Road and Cooke Avenue entrances: 2005
Parking lot curbing 2005

Completed Management Items:

1. Boggy Meadow Road should be improved going through the Cooke's Pasture wetland, in accordance with the trail maintenance plan prepared for the Conservation Commission and approved with Wetlands Order of Conditions 246-356. This includes:

a) Placing twin culverts under the road to replace old culverts, as shown on the plans (top priority). (Done 1998**)**

b) Relocating the trail out of the wetlands onto the adjoining upland areas, as shown on the plans (top priority). (Done 1998)

2. The White Oak Tree (52" diameter) at the intersection of Marian Street Trail and Boggy Meadow Road should receive the following treatment (based on the recommendations of David Cotton, Massachusetts Certified Arborist and President of Cotton Tree Service): pruned (class 1) of dead limbs and storm damage, liquid fertilizer, and flush cut of all small diameter underbrush and saplings beneath the white oak canopy. The leaning 20" hickory tree that threatens the white oak should be removed and the other trees around the perimeter of the oak canopy should be trimmed. (Done 1999)

3. The apple orchard in Cooke's Pasture should be rehabilitated. Within a year in the Cooke's Pasture apple orchard north of the wetland, all non-fruit trees should be cut. The area should be brush hogged as in 1995 and thereafter should be brush-hogged every three to five years. In the apple orchard south of the wetlands, select trees competing with the apple trees should be cut, but no vegetation in the wetland should be cut. (Done; brush-hogged 2004)

4. Marian Street Trail should be extended to Marian Street, in the Marian Street Section. Extend existing pressure treated wood boardwalk for an additional 120 LF along Marian Street (Done 1999).

5. South Pasture should receive an herbicide application in spring 1998. (Done)

6. A new parking lot (approximately 5 cars should be installed just off North Farms Road. This parking lot should serve as an overflow parking lot during the summer, and the primary parking lot in the winter and spring. If Mr. Warburton sells his parcel to the city, the parking lot should be located on his property; otherwise it should be located at the beginning of the access roadway. (Con. Com. agreed to complete by 12/1/96 as a condition of their purchase of Warburton property.) (Done)

7. A gate should be placed on Boggy Meadow Road by the rock outcropping between Pines Edge Conservation Area and the Moose Lodge to close off private vehicle use of Boggy Meadow Road. Install a steel swing gate along Boggy Meadow Road at the beginning of City property (the private landowners were unwilling to locate a gate at the entrance to Boggy Meadow Road by the Road Moose Lodge). (Done 1998)

8. Improvements are needed on Boggy Meadow Road to allow access to maintain and repair the Fitzgerald Lake Dam (top priority). Specifically, a culvert should be replaced where Boggy Meadow Road crosses the first boggy meadow and a culvert should be installed on Fitzgerald Lake Trail approximately 100 yards north-west of Boggy Meadow Road, where the trail crosses a stream. Gravel is needed to fill low spots in the road within the conservation area. A wetlands permit is needed for some of this work. (Done 1998)

9. A map showing trails, section names and locations should be posed at the North Farm Road (by the road, not the parking lot because of vandalism problems) and the Cooke Avenue entrance,

with Plexiglas installed over the map. (Done, map updated in 2005)

Completed Acquisitions:

1. The Cooke's Pasture to the east, which contains valuable plant and animal habitat, and especially the area from the wetlands south of Broad Brook north to the Abuza Section and an area to allow a trail linkage to Marian Street Conservation Area. (Top citywide priority for the Commission.) (Done 1994)
2. The Warburton in-holding, or at least the very small section where there may be an encroachment by the Fitzgerald Lake Access Road**.** (Done 1995)
3. The Swayze in-holding**.** (Done 1997)
4. The old telephone right-of-way (long since discontinued) held by A.T.T. (Done 1994)

See Management Plan section for Broad Brook Coalition's Management Plan for Fitzgerald Lake Conservation Area

JAMES H. ELWELL CONSERVATION AREA

Improvements:

1. The Commission should ensure that the farmland does not grow into the abutting floodplain forest or vernal pool area.
2. Farm Licensees should repair the gate that blocks access to the field and the access roadway for farm equipment, as a condition of the license.
3. The Commission should request City Council approval for a five-year lease and lease through competitive bid for 2006-2011.
4. The Conservation Commission should explore methods for removing purple loosestrife. When the best method is established, this effort should be conducted through the help of volunteers.

Acquisition: The Commission should acquire some additional floodplain forest and riverfront buffer parcels north of Elwell Conservation Area. Eventually a greenway could be acquired up to the Hatfield town line.

Completed Items

Five-year farm license: 1989, 1992, 1997, 2006

Non-native plants (purple loostrife, Japanese Knotweed) removed from mainland and island, October 1994

MARY BROWN'S DINGLE

Improvements:

1. The Commission should work with and establish a relationship with the abutters of this area to help inspect the area for encroachment.
2. The Commission should attempt to educate the abutters about the history of this area and the impact of yard debris being discarded around the perimeter of this area.
3. The Commission should examine the potential for removing the storm sewer through center of property, if this can be done without flooding, to restore the wetlands for storm water treatment and storage functions.

Management Items:

1. Encroaching fill and garden area should be removed and the natural area restored on the southerly and

westerly sides of the conservation area.
2. Send out an educational mailing to the abutters of this conservation area. Inform abutters of permit process for work in a buffer zone or resource area.

MILL RIVER GREENWAY: LEEDS NORWOTTUCK TRAIL SECTION
Acquisition: Expand area to buffer the bike path and Beaver Brook.

Two studies: *An Inventory of Mill River Corridor Discharge Sources*, by students of Elizabeth Farnsworth, Environmental Science Seminar, Smith College, April 1999 and the Mill River Revitalization Plan, Northampton, Massachusetts, by Landscape Planning Studio, Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst, Fall 1999 are on file in the Office of Planning and Development. The Conservation Commission should continue to work with the Planning Department and/or other entities to seek funding sources for some of the revitalization projects presented in these reports.

MILL RIVER GREENWAY: YANKEE HILL SECTION
Acquisition:
1. The Commission should acquire the land between the Greenway, the State Hospital agricultural lands and the Mill River.
2. The Commission should attempt to obtain a pedestrian right-of-way or land along the Mill River to the north of this parcel.

Completed items
"Mill River Greenway, Yankee Hill Section" sign installed: Summer, 1989

MINERAL HILLS CONSERVATION AREA

Improvements:
1. The Commission should continue to lease the 7 acres of farmland at the Mineral Hills Conservation Area, and seek approval from City Council to extend this lease from 3 years to 5 years. The 2002-2005 Mineral Hills lease agreement includes responsibility for the maintenance of the existing internal trail system. A Soil Conservation Plan prepared by the USDA Natural Resources Conservation Services is included in the license agreement. This plan should be amended, if desired, by the NRCS and the Conservation Commission to meet individual farmer's needs for a particular growing season.
2. The Commission should work with neighbors in the area to continue maintenance on the existing trail system.
3. The Commission should locate a two-car parking lot along the southern edge of the frontage on Sylvester Road.
5. A trail, including a wetland crossing, is needed from the parking lot to the network of trails further back. The Sylvester Road neighborhood should build this trail, with the City providing materials.

Management Items:
1. The Commission should obtain a Soil Conservation Plan prepared by the USDA Natural Resources Conservation Services.

Acquisition: Build into 500-acre conservation area in Northampton and Westhampton

RAINBOW BEACH CONSERVATION AREA

Improvements:

1. The Commission should continue to work with the Environmental Police regarding regulation and enforcement issues at this site.
2. The Commission should organize volunteers to remove Japanese knotweed and purple loosestrife, which are colonizing non-native species that out-compete native species with higher wildlife values.

Completed Items

Junk car removed: 1991

No camping signs installed (Natural Heritage): 1991

Removed non-native plants in sensitive areas (Natural Heritage): 1993

ROBERTS HILL CONSERVATION AREA

Maintenance:

1. Howard's Ice Pond Dam (DCR No. 2-8-214-8) is classified by the DCR Dam Safety office as a "low hazard" dam and is not routinely inspected by DCR. The dam must be regularly inspected and maintained.
2. The driveway into Roberts Hill, which has not been maintained or used for many years, should not be repaired and Roberts Hill should remain closed to vehicles.
3. Maintain vista from high point on Roberts Hill overlook.

Acquisition:

1. The Commission should attempt to acquire the small Massachusetts Electric parcels on the Mill River and South Main Street, Leeds and between the Mill River and Water Street.
2. The Commission should attempt to acquire the private land just north of Roberts Hill and the Roberts Hill overlook.

The Commission should attempt to acquire the unused Massachusetts Electric power line right-of-way that crosses Roberts Hill Conservation Area.

Management Items:

1. Clearing of trees along the slope of the dam should be cut and prevented from rooting. (Trees cut by Smith Vocational Forestry Dept. Fall 1998)
2. The Conservation Commission should work with the neighbor abutting the property at the end of Water Street to prevent encroachment into the Roberts Hill entrance. (Neighbor moved all items stored at entry way, Fall 1998)
3. The dam is sound and stable, but requires repairs to the concrete wall on top of the dam, repairs to the concrete spillway walls, grading of the crest to protect the concrete wall, removal of all trees on the downstream slope and toe, and rip rap at the base of the spillway to protect the stream bed from erosion. Design by Tighe & Bond completed 1998; construction completed summer 1999.

Completed Items

Minor concrete repairs to the dam spillway and apron (by abutter): 1990
Brush and trees on the dam removed: Fall 1990, 1991, 1992, Spring 1993
Trees cut on overlook to improve view: Fall 1991; Spring 1993
Major spillway restoration and rehabilitation 1999
"Roberts Hill Conservation Area, City of Northampton" sign installed at the end of Water Street and opposite the David B. Musante Beach (2001).

SAWMILL HILLS CONSERVATION AREA

Improvements:

1. Locate and mark boundaries, including right-of-way access. Since right-of-way access is tree-less, some sort of permanent stakes should be used as markers. This will help avoid future disputes and facilitate access maintenance and wildlife management activities.

2. A spring walk guided by one or more naturalists and aimed at the residents of Avis Circle would help promote familiarity with the parcel and increase their understanding/appreciation of the area. Special advise about co-existing with wildlife such as bears and coyotes may be provided. If the access is marked by then, residents could resolve this concern.

3. Cut (and leave) all stems (except shrubs) to maintain valuable early successional wildlife habitat (see Stand descriptions below). A small crew can complete this within 1 day with loppers, or a single person can complete this in 2 days with a chain saw. Basic knowledge of what to cut/leave is important, so that valuable wildlife plants are not inadvertently cut. This practice should be repeated every seven years or so.

4. The Conservation Commission should implement the 1998 Sawmill Hills Forest Stewardship Plan as outlined below:

A) Boundaries: The primary concern is to identify and mark the property boundaries. Good boundaries are an important starting point for good neighbor relations.

B) Recreation: Stand 1 - With its open understory, frequent rock outcrops and rolling terrain, the parcel is well suited to recreational activities such as hiking, snowshoeing and cross-country skiing. Stand 2 - The view from atop the steep embankment is nice, and the likelihood of seeing wildlife is high, so a trail on the property should skirt along the edge. Stand 3 is the approximate route of the 20' wide right-of-way at the end of Avis Circle. Stand locations are shown on the map attached to the Forest Stewardship Plan in the Sawmill Hills file.

C) Wildlife: Stand 1 - The abundant acorn crop provided by this parcel is an important component of wildlife. Some thinning (i.e. culling) of suppressed trees would increase the acorn production and improve the long-term health of residual trees. However, the low value of the trees to be removed as firewood would probably preclude this type of work, unless it was incidental to projects on adjacent lands or if local landowners to supply their own cordwood carried out the work. Stand 2 - The natural and rapid regrowth of Southern New England forests on fertile sites works to quickly replace the early successional stage of forest growth, consisting of seedlings, sprouts and shrubs, with pole-sized trees. This is good for timber growing, but bad for species that depend on this type of ephemeral habitat. Revisiting this stand every 5 years to cut back all trees (shrubs can be left) is the best way to maintain a young forest habitat.

D) Forest Products: Stand 1 - The white pines in the midstory could be developed by thinning, as described above, but removing a greater number of trees. The same economic restrictions would likely apply. Ideally, the pine trees would be professionally pruned following the thinning to grow pine of the highest value. If the opportunity arises, it might be worth growing pine in this fashion on about 5 acres - more by way of demonstration than a serious timber growing operation. Stand 2 - Although the productive site is well suited to growing timber, the small size of Stand 2 makes this unfeasible. This area should be controlled for invasive exotic shrubs, especially while it is still relatively early. Successful control usually involves pulling (for smaller shrubs), or cutting and applying herbicide to the remains.

E) Fire: People cause most wildfires in Massachusetts, intentionally and unintentionally. Dry grassy habitats like this former gravel pit are very flammable. An effort should be made to reduce the likelihood of human-induced fires (such as posting the access "No Smoking") as well as the chance of a fire spreading into the residential area. It would be advisable to discuss fire prevention and fire fighting - including the possibility of prescribed burns to reduce fuel loads.

F) Education: A spring wildflower walk, with conversations about birds, other wildlife, and possibly management, which would be open to the public - with a special effort to invite residents of Avis Circle - would help many recent arrivals to become familiar with this nearby conservation resource.

G) Though Stand 3 is not technically a "forest stand", this 20-foot-wide, 0.73-acre right-of-way is a potentially important and controversial part of the town conservation land. This connector from Avis Circle to the conservation land crosses Lots 7 & 8 along their common boundary, then follows the southern and western boundary of the Stormwater Retention pit before heading off to the conservation land.

5. This area, an old gravel pit which is growing back into grasses, wildflowers and trees, will need to be mowed or partially cleared (ideally annually) to keep it from overgrowing with shrubs and trees.

6. The broader implications of all management proposals, including a do-nothing policy on this property, should be considered.

Management Items:

1. Implement Sawmill Hills Conservation Area Landowner Outreach Project per contract agreement with the Massachusetts Forest Stewardship Small Grants Program.

Acquisitions:
Build into a 500 + acre conservation area, preserving trails, ride lines, vernal pools and coyote dens.

STATE HOSPITAL AGRICULTURAL LAND--DRUMLIN AND MILL RIVER
Although managed by Smith Vocational Agricultural School, the Conservation Commission has contributed to conservation management because of its role holding an agricultural preservation restriction on the entire property and a conservation restriction and public right-of-way on the drumlin and the buffer along the Mill River.

Improvements:

1. If the opportunity exists, the Conservation Commission should sponsor controlled burns of the drumlin to restore Grasshopper Sparrow habitat (a state concern species) and remove multi-flora rose and woody vegetation. The members of the University of Massachusetts Forestry and Wildlife Program should do burning, with assistance from the Natural Heritage Program. (See Completed Management Items for burn dates.)
   After the burning, Smith Vocational should again clear brush from the top of the drumlin annually in the fall. All cutting on the drumlin should occur after mid-August to avoid disturbing spring and summer ground-nesting birds.

   Over-grazing should be avoided in this area. Cattle or sheep should be rotated through this area or another area should be used during the nesting season. Bunch grasses should be maintained at 4"-12".

   Woody vegetation along the hillsides, particularly the multi-flora rose, should be repeatedly cut and removed from the site. Alternatively, Scottish Highland cattle have been shown to be effective grazers on woody vegetation.

2. Post the Drumlin with signs informing the public that the drumlin is used as nesting habitat (similar to signs Arcadia is currently using) to keep people and pets off the area during nesting season, or mow trails along the borders for visitor use.

3. Work with adjacent landowners to improve grazing and mowing practices.

4. Smith Vocational will maintain a road used as a walkway within the 100-foot buffer from the river and most of the rest of buffer should be allowed to return to native vegetation. The Smith Vocational School will cut one part of a field in the buffer area, on the northern edge of the property, for hay.

Improvements to Archeological Resources

The Northampton State Hospital burial ground is protected from development by a permanent agricultural-use restriction on the property held by the City of Northampton. However, if the location of the cemetery is forgotten it is possible that the Smith Vocational School or a subsequent renter or owner of the property might unwittingly use the field not only for instruction in haying but also for instruction in plowing and planting, which would also disturb the soil deflations and patches of low vegetation that are the only marks of the locations of the graves.

Erecting a memorial to the burial ground is recommended as a measure for preserving knowledge of the use of the site for the hospital cemetery. The memorial must not disturb subsurface burial remains, the location of which cannot be accurately determined by surface indications. Not all burials result in soil deflations or distinctions in vegetation.

Preservation and restoration is recommended for the 1958 bench and surrounding bushes that were the first memorial commemorating the field as a burial ground. The bench and bushes are an important part of the history of the cemetery. They are particularly important to preserve as the earliest precedent to the current effort to erect a memorial to those buried in the cemetery. Chapter 272, Section 73 of the enclosed Massachusetts Laws and Regulations Protecting Burial Grounds indicates that it is illegal to remove either the bench or the bushes because they were built as a memorial.

It is recommended that the bench built in 1958 be restored if possible without excavation or any other disturbance of the ground. If any excavation is required to restore the bench the restoration plan must be reviewed by the Massachusetts Historical Commission, which will require that an archaeologist mitigate any impacts of excavation on the burial ground.

It is also recommended that the surrounding bushes be preserved and trimmed by hand above ground to create access to the bench while maintaining its location in the arbor created by the overgrown bushes, which are picturesque and create a useful protection against the wind.

It might be possible to mount commemorative plaques on the stone bench supports. A plaque could be mounted on one of the stone supports noting when the bench built as a memorial to the burial ground. This plaque would restore an important part of the history of the cemetery. A second plaque could be mounted on the other stone support for the modern commemoration of the cemetery. This plaque could include the dates of use of the burial ground (1858-1921), the 181 confirmed burials, the 413 potential burials, and a short commemorative statement or poem. It is recommended that this plaque also note the existence of at least 2 burials in the woods across the road to the north, and the fact that the boundaries of the cemetery have not been determined. It is important to preserve the present knowledge about the cemetery for future generations that may otherwise forget it.

If another memorial is erected it must avoid disturbing any graves in the cemetery. It is possible to erect a completely aboveground dry-laid stone monument such as a stone cairn that would not disturb the ground with a foundation. However, a memorial plaque could not be mounted on this unmortared monument. Because any mortared monument would require a foundation, its design would need to be reviewed by the Massachusetts Historical Commission, which would require an archaeological survey and/ or excavation to mitigate the impact of the foundation excavation on the burial ground. If an archaeologist found evidence of a grave shaft in the planned location of the monument, it would have to be moved to another location until one was found where excavation would not disturb any burials. Erecting a sign would involve the least amount of excavation and archaeological investigation to prevent disturbance to burials. It is recommended that any memorial be placed near the road to minimize disturbance to burials.

The Northampton State Hospital Memorial Committee suggested the memorial could include material from old buildings at the Northampton State Hospital that are being torn down. The Community Builders, who are doing the demolition, have informed the NSH Memorial Committee that they could save some of the materials, including bricks and bars used on the caged porches. People in the community suggested a memorial to symbolically show that the people buried in the site had symbolically broken free of the institutional confines. One possible memorial would be an open brickwork tower with a barred window. The tower could be open at the top to symbolize the escape of the buried inmates to heaven. Flowering vines could grow on the open brickwork to symbolize how the living spirit triumphs over stone and bars that may hold a person's body. Rebecca Macauley suggested that stone birds might further symbolize the spirits of the inmates flying free of the hospital. This memorial would also evoke the demise of the hospital into a ruin and be a memorial to the demolition of some of the buildings.

If a plaque is not mounted on the reconstructed bench, it is recommended that a plaque be mounted on a sign or a memorial, including the dates of use of the burial ground (1858-1921), the 181 confirmed burials, the 413 potential burials and a short commemorative statement or poem. It is further recommended that this plaque also note the existence of at least two burials in the woods across the road to the north, and the fact that the boundaries have not been determined. Again, it is important to preserve for posterity the knowledge that has been recovered about the burial ground.

A few long depressions were found running south-north across the hill that appear to have been made by large tires of a tractor or other agricultural equipment running across the field when the soil was wet and soft, thus displacing soil down the hill. It is strongly recommended that haying be conducted only when the ground is completely dry. Barbara Hopson, the Local Land Use Administrator for the Department of Agricultural Resources, has agreed to draw up a regulation to this effect for the Smith Vocational School. Further archaeological reconnaissance and subsurface testing such as resistivity testing are recommended to identify the boundaries of the cemetery and map the soil deflations and vegetation indicating burials. Further archaeological reconnaissance in the area might also locate small-unmarked gravestones of the types Mr. Mielke found on the burial ground in his childhood. Further documentary research is recommended to find the cemetery plot records and map that Mr. Mielke saw years ago at the Northampton State Hospital.

MANAGEMENT PLAN--RECREATION COMMISSION AREAS

All recreation areas should be managed to ensure long-term use for active recreation. Currently, the Department of Public Works Recreation Division does the maintenance in recreation areas and parks, while maintenance of schools sites, including those used for recreation is done by the School Department.

On-going maintenance activities for recreation areas include:

1. Mowing grass
2. Turf management, including lime striping
3. Equipment maintenance
4. Buildings and restroom maintenance
5. Trash removal
6. Monitoring and enforcing agreements where second parties are responsible for maintenance of Recreation Commission properties (Nagle Downtown Walkway and the Gothic Street Pocket Park).
7. Inspecting all signs and repairing or replacing as needed.

The top management/capital improvements priority for the Recreation Commission is the rehabilitation of Veterans' Field. Outside of rehabilitation of existing recreation areas, expansion of the city and state bike paths are the top recreation priorities identified in this plan.

Within each of the recreation and park areas listed below, projects are listed in order of priority.

COMMUNITY GARDENS

The plots are located on the State Hospital property and contain 440 plots that are rented to the general public. The gardens are under the jurisdiction of the Recreation Commission and are directly supervised by a volunteer committee made up of concerned gardeners. Each year the plots are completely sold out and waiting lists are formed to distribute any plots that are returned. The DPW Recreation Division assists the Department in maintaining the community garden site.

Also investigate other locations for satellite gardens sites at additional parks throughout the City.

NORTHAMPTON HIGH SCHOOL

Northampton High School Fields are heavily used for recreation on weeknights and weekends. Major

renovations were included as part of the High School expansion (2000).

MAINES FIELD

Improvements:

1. Design fences, roadways and fields to be able to prevent or minimize flood damage from the powerful flow of the river. There is no cost-effective way to prevent Maines Field from flooding periodically or even significantly slowing down the velocity of the floodwaters. There are several issues outlined below:

a) Maines Field was an island until one channel of the Mill River was filled in to create the recreation area. The flow patterns in the river that created the island and the channels still exist.

b) It would be next to impossible to obtain environmental permits and would be very expensive to re-channel the flow.

c) If flow patterns were changed, it is likely you would send the energy somewhere else nearby, and cause new flooding or erosion problems on someone else's property.

Mitigation Options:

Breakaway fences – were installed and can be opened if flooding occurs.

Ensure vegetation coverage, especially grass, as much as feasible over the entire site.

Re-consider the need for the parking lot farthest from Riverside Drive or replace asphalt with permeable pavement that would allow grass to grow inside of the paved area (e.g. Grasspave or Turfstone).

Replace gravel road with the same permeable pavement as above.

Design fencing so that it doesn't channel water, especially in the dugout area.

Improvements continued:

1. Install new lights on ballfield.
2. Renovate and improve picnic and play equipment facilities.
3. Mark handicap parking spaces.
4. Create an accessible (trap rock gravel or asphalt) trail in play and game areas
5. Repair or replace restrooms to make them accessible
6. Construct an accessible water fountain.
6. Continue to work with the Bocce Committee and the Council on Aging to maintain the two bocce courts.

SHELDON FIELD

Improvements:

1. Built a combined park-and-ride/recreation parking lot with handicap spaces and ramp up to Bridge Street. This State-funded lot was completed in 2001.
2. Re-design the existing parking area to include the installation of basketball facilities as well as 30-35 parking spaces. This was completed in the fall of 2004.
3. Install proper landing materials under play equipment to improve safety.
4. Replace restrooms to make them accessible and install these new restrooms out of the floodplain in a more centralized location
5. Create an accessible (trap rock gravel or asphalt) trail in play and game areas
6. Install all new play equipment that is handicapped accessible for all age groups
7. Repair all field fencing
8. Construct an accessible water fountain

Acquisitions: Acquired land abutting Sheldon Field to allow for future recreation expansion.

VETERANS MEMORIAL FIELD

Improvements:

1. Total rehabilitation renovation is slated to begin in the summer of 2005. The baseball and soccer fields will be renovated. The City's first skate park and inline skate rink will be added.
2. Installed proper landing materials under play equipment to improve safety
3. Repair or replace restrooms to make them accessible – completed 1998
4. New field entrance/exit onto West Street was completed and is in full use.

MANAGEMENT PLAN--OTHER PARKS AND RECREATION

CHILD'S PARK

Childs Park (private non-profit) is managed and maintained by independent boards of trustees. Because it is internally maintained without city funds, it is not discussed in this management plan.

LOOK PARK

Although managed and maintained by an independent Board of Trustees, Look Park is owned by the city. It is the most heavily used recreation area in the city and serves regional needs. Improvements to obsolete infrastructure and improvements to its regional services are needed, in spite of major upgrades made in recent years with Look Park and state and federal funds.

The Garden House at Look Park is the area's premier community and banquet facility, providing superior accommodations for public and private parties, meetings, and community events.

Located in one of New England's finest parks, the Garden House stands on the site of the former Look Park pool building, a nostalgic Northampton landmark built in 1930. The restoration of the building, now unsurpassed in comfort and convenience, keeps faith with the Mission style architecture of the earlier period.

NORTHAMPTON WATERSHED AND AQUIFER LAND

Management/restrictions: DPW should consider placing restrictions on property to insure it remains as forestry and open space.

NORTHAMPTON BIKE PATH

Improvements:

Extending the Northampton Bike Path and linking it to other bike paths is a top recreation priority, and a top alternative transportation priority. The following actions have been identified:

PULASKI PARK

Improvements were done in 1996.

SMITH VOCATIONAL AGRICULTURAL SCHOOL

Management/restrictions:

Place restrictions on agricultural property to insure it remains as forestry and open space.

SMITH VOCATIONAL SCHOOL V.A. PARCEL--FORESTRY STUDIES

Improvements:

Use the existing trail system to build a trail to link to J.F.K. Middle School and, eventually, to Fitzgerald Lake Conservation Area.

Management/restrictions: Place restrictions on property to insure it remains as forestry and open space.

SOUTH STREET SCHOOL / COMMUNITY MUSIC CENTER

Management/restrictions:

If the former school site is ever sold, a public right-of-way should be retained to allow pedestrian access from South Street to Veterans Field.

STATE HOSPITAL SOCCER FIELD

The future school site parcel (parcel C) of the Northampton State Hospital was developed by the city for use as one multi-purpose field and two softball fields. It should also be considered as a possible future elementary school site. The opening of the fields has been delayed due to DPW budget cuts, but is expected to open in the fall of 2005. Continued maintenance of recreation fields by the DPW is dependent upon funding and adequate personnel

NAGLE DOWNTOWN WALKWAY

A handicapped accessible walkway located on an old railroad right-of-way in the downtown area of the City. The DPW Recreation Division assists the Department with the maintenance of the walkway. Several abutters to the walkway have maintenance responsibilities along the walkway in return for easements granted by the City.

SECTION 10
PUBLIC COMMENTS

PUBLIC COMMENTS

The Northampton Wildlife Committee:

- That the City preserves contiguous land corridors for wildlife
- That the City improves human quality of life through air/water quality, walkways and bicycle trails
- That the City reinstates funding for open space acquisition
- That the City undertakes a review and revision of current "flag lot" zoning
- That the City implements a moratorium or other building cap on residential construction
- That the City ensures full public disclosure and review of the statutory "right of first refusal" to purchase and/or assign purchase rights to Tax Chapter 61 lands
- That the City endorses adoption of the Community Preservation Act
- That the City and its relevant boards reduce or eliminate the granting of waivers and special permits to projects that don't meet existing regulations
- That the City and its relevant boards review current requirements for subdivision road connections that create new "ANR" development
- That the City utilizes, among its other tools, its existing Transfer of Development Rights (TDR) bylaw to shift residential development away from outlying areas and balance it against other development (such as the "Village at Hospital Hill")

The Chairman of the Community Preservation Act:

- That the City commits to securing the widest range of funds available for the purpose of protecting open space, including state-matched funds through the Community Preservation Act.

The Tree Stewards of Northampton:

- That the City encourages stronger protection of open space and land within the City. In particular, open space translates to preservation of trees, which are important to our air, water, animals, etc.
- That the City identifies and implement an open space strategy that protects corridors of contiguous tree and forest canopy throughout the City
- That the City reinstates an annual budget line item for the purchase, planting and maintenance of City trees
- That the City undertakes an initiative to further protect forested watershed lands

Comments from the public

That the City places less emphasis on development and more on preservation of open space
That the City focuses on development on existing disturbed areas and not new land that could endanger wildlife, wetlands, vernal pools, etc.
That the City conducts water supply calculations and predict how new development will affect the sustainability of the current supply
That the City publishes actions required to meet current open space and recreation needs
That the City allocates funds for open space acquisition
That the City publishes a recreation map on the website
That the City maintains green pockets in the downtown/urban areas and identify new potential urban greenspaces
That the City creates a collaborative approach to working with developers
That the City does not convert any parks or open space area to other uses
That the City develops of a list of areas of urban greenspace areas
That the City purchases more open space and green corridors
That the City educates landowners on land protection options
That the City helps create neighborhood organizations
That the City produces a framework for future acquisitions and funding sources
That the City explores a wide range of funding options for open space
That the City maintains existing open space and recreational areas
That the City investigates potential acquisitions of Veteran's hospital/Smith Vocational land
That the City creates a plan to curb development in the Park Hill Road area
That the City produces more traffic volume studies

Public Comments on types of maps that would be beneficial to the Open Space and Recreation Plan

Bird Flyways/breeding areas
Northampton Tree cover
Build out analysis
Labeled conservation parcels
Wildlife committee maps
Trail and bike connections
Protected Open Space
Regional Open Space
Vernal Pools/Habitat NHESP

SECTION 11
REFERENCES

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Department of Environmental Management: www.state.ma.us/dem
Department of Fisheries, Wildlife and Environmental Law Enforcement: www.state.ma.us/dfwele
Department of Environmental Protection: www.state.ma.us/dep
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Connecticut River Five-Year Action Plan 2002-2007 developed by the Massachusetts Executive Office of Environmental Affairs

The following plans and Ordinances are attached by reference:

"Americans With Disabilities Act (ADA) Transition Plan, City of Northampton," 1992
"Northampton State Hospital Plan, An Element of the Northampton General Plan," Northampton Planning Board, 1993
"Rediscovering Northampton, The Natural History of City-Owned Conservation Areas," 1993
"Section 504 Handicap Accessibility Self Evaluation, City of Northampton, Park, Recreation and Conservation Facilities," 2000, 2005
"Northampton Vision 2020 Vision and Consistency Analysis, A Blueprint for the Northampton Vision 2020 Comprehensive Plan," 1999
"Broad Brook Coalition's Management Plan for the Fitzgerald Lake Conservation Area" Broad Brook Coalition, 2005
"Northampton Recreation Department Five Year Strategic Plan" Northampton Recreation Commission, 2005
City of Northampton Flood Hazard Mitigation Plan, 2004
City of Northampton Wetlands Ordinance
City of Northampton Zoning Ordinance